Contents – (Click on the topics below for easy access)

1. *INTRODUCTION*

This is the fourth edition of the EIS Health and Safety Handbook. The revisions have been made to bring the Handbook up-to-date on legal requirements and to include additional advice and guidance developed by the EIS and TUC (See Chapter 27).

The EIS Health and Safety Handbook has been designed to provide Health and Safety Representatives with information and advice on a wide range of safety issues and it provides a comprehensive reference.

The format of the Handbook is designed to permit easy updating. Please ensure that the Handbook is updated with the replacement pages as they are issued and pass it on to your successor as EIS Safety Representative should you give up this role.

The Handbook cannot provide all of the answers to every health and safety problem but it will help to identify problems and potential solutions. Chapter 2 provides information on how to obtain advice and additional information and is essential reading for all Safety Representatives.

The first edition of this Handbook was based on the TUC's publication 'Hazards at Work' and the EIS wishes to acknowledge and thank the TUC for its permission to use this material.

2. *INFORMATION AND ADVICE*

EIS INFORMATION AND ADVICE

This Handbook provides sufficient information for EIS Reps to be able to deal with the majority of health and safety issues raised by members. For further advice or where problems are not being resolved the Local Association Secretary or Branch Secretary should be contacted. Local Association Secretaries and Branch Secretaries can seek further advice and support from Officers when required.

If a health and safety emergency arises and the Local Association Secretary or Area Officer cannot be contacted the National Officer for Health and Safety should be contacted. If there is a situation where there is serious risk of injury, the employer is refusing to take action and the Rep has been unable to contact any of the above EIS personnel, the Health and Safety Executive should be contacted direct. Contact details for the local HSE offices are below. If there is such a serious incident, or in any situation where a HSE investigation or inspection has taken place, the Rep should inform the Local Association Secretary or Branch Secretary as soon as possible.

HSE OFFICES IN SCOTLAND

ABERDEEN:	01224 252510	Lord Cullen House, Fraser Place, AB25 3UB
EDINBURGH:	0131 247 2000	Belford House, Belford Road, EH4 3UE
GLASGOW:	0141 275 3000	Mercantile Buildings, Boswell Street, G2 6TS
INVERNESS:	01463 723260	Longman House, 28 Longman Road, IV1 1SF

INFORMATION FROM HSE

Inspectors must contact Safety Representatives on their visits to the workplace and provide them with reports, survey results, and details of written or verbal warnings given to the employer; written undertakings from the employer; details on prohibition or improvement notices or other legal proceedings which have been issued.

The **Employment Medical Advisory Service (EMAS)** consists of full time doctors and nurses, employed under the umbrella of the HSE. EMAS has the task of identifying health hazards related to employment, by monitoring studies and surveys; acting as a central information bank - advising unions and employers on how to deal with health hazards and acting as a focus for medical aspects of employment problems, particularly disablement and rehabilitation.

HSE have established a public information and advisory service at the HSE Information Centre, Sheffield. The purpose of the information and advisory service, linked to HSE's library services, is to supply trade unionists and employers with a wide variety of statutory guidance material, including HSE guidance notes, posters, pamphlets, reports, regulations, codes of practice and explanatory booklets.

A full list of health and safety publications is given in the free publications booklet available from HSE. Safety Representatives can arm themselves with this little catalogue and use it as a starting point in finding out what Government publications are available on particular subjects.

For general enquiries on health and safety matters, the HSE website is an excellent resource for Safety Representatives. It contains information on most occupational hazards, general guidance and guidance specifically for the Education Sector and updates on changes to legislation and details of successful legal action. Safety representatives can also access and download resources and use interactive web tools free of charge.

www.hse.gov.uk

HSE publications can be obtained from HSE Books, PO Box 1999, Sudbury, Suffolk, CO10 2WA, Tel: 01787 881165 or via the internet at www.hsebooks.co.uk.

INFORMATION FROM THE TUC

The TUC's website, **www.tuc.org.uk**, provides health and safety information. Reps are encouraged to sign up to receive the weekly news and information bulletin, Risks.

INFORMATION EMPLOYERS SHOULD PROVIDE

For all employees

The employer has a wide ranging duty to provide information, instruction and training to all employees. Employers are required to display a basic poster on health and safety law and have a safety policy.

For Safety Representatives

Safety Representatives are entitled to receive a much wider variety of information (See Chapter 4). Safety Representatives require information over and above that provided for employees. This information includes:

- statutory information - Acts, Regulations, Approved Codes of Practice;
- official publications - HSE Guidance Notes, Industry Advisory Committee publications;
- technical information about substances or equipment;
- information from manufacturers and suppliers;

- directories of toxic substances and safety manuals;
- accident reports, accident and sickness records, statistical information and reports on notifiable accidents, dangerous occurrences and cases of industrial diseases;
- notices and reports from inspectors, Improvement and Prohibition notices (See Chapter 2), reports, survey results; and
- reports from safety consultants, doctors, safety officers or safety engineers.

In addition every employer shall consult Safety Representatives in good time about:

- the introduction of any measure at the workplace which may substantially affect the health and safety of the employees who the Safety Representatives represent;
- arrangements for appointing or, as the case may be, nominating competent persons under the Management Regulations;
- health and safety information which the employer is required to provide to the employees who the Safety Representatives represent;
- the planning and organisation of any health and safety training; and
- the health and safety consequences of the introduction (including the planning thereof) of new technologies into the workplace.

All employers with more than five workers have a duty to prepare and make available a written and up-to-date statement of their safety policy. This obliges employers to consider carefully, in each set of circumstances, the organisation and arrangements which they must create to ensure healthy and safe working conditions.

3. *HEALTH AND SAFETY AND THE LAW*

THE HEALTH AND SAFETY AT WORK ACT

The Health and Safety at Work etc Act 1974, which came into force in 1975 was designed to overcome some of the weaknesses of earlier health and safety law. Its main aim was to ensure that all workers in all occupations were protected by safety legislation. It was designed to provide a broad framework within which health and safety could be regulated by providing for a comprehensive, integrated system of law dealing with the health, safety and welfare of work people and the health and safety of the public as affected by work activities. The Act did six main jobs:

- completely overhauled and modernised the existing law dealing with safety, health and welfare at work;
- put new general duties on employers, ranging from providing and maintaining a safe place of work to consulting with their workers;
- created a new Health and Safety Commission;
- reorganised and unified the various Government inspectorates into a body called the Health and Safety Executive;
- provided new powers and penalties for the enforcement of safety laws; and
- established new methods of occupational safety and health and new ways of operating future safety regulations.

All the main requirements of the Act qualified with the words ***"as far as is reasonably practicable"***. This term imposes a qualified duty, unlike an absolute duty imposed by terms such as 'shall' or 'must' and means that there can be a consideration of the costs of a particular safety measure. The costs are balanced against the level of risk. However, it is the duty of the employer to demonstrate that he or she has done everything reasonably practicable and that to do more would be far too costly when compared to the level of residual risk.

To see what the general duties of the Act mean in practice it is necessary to refer to other sources of health and safety law such as regulations made under the Act, Approved Codes of Practice (ACoPs) and guidance documents.

KEY FEATURES OF THE ACT

The Act's more significant sections are outlined in the panel below:

Section 1 states the general purpose of Part 1 of the Act, which is aimed at:

(a) maintaining or improving standards of health, safety and welfare of people at work
(b) protecting other people against risks to health and safety arising out of work activities
(c) controlling the storage and use of dangerous substances

Section 2 puts a general duty on employers to ensure the safety, health and welfare at work of their employees; to consult them concerning arrangements for joint action on health and safety matters, and in certain circumstances, at the request of duly appointed or elected trade union Safety Reps, to establish safety committees; and to prepare and publicise a written statement of their safety policy and arrangements.

Sub-section (4) of this section of the Act makes provision by regulations for the appointment of workers' Safety Reps by recognised trade unions.

Section 3 places a general duty on employers and the self-employed to ensure that the activities do not endanger anybody, and in certain circumstances, to provide information to the public about any potential hazards to health and safety.

Section 4 places a duty on anybody responsible for places of work to ensure that premises themselves, as well as plant and machinery in them, do not endanger people using them.

Section 5 has been repealed and its requirements covered by environmental legislation.

Section 6 places duties on anyone who designs, manufactures, imports or supplies an article or substance for use at work to ensure, so far as it is under his control, that the article or substance is safe when used in accordance with information supplied by him. The duty extends to the provision of necessary information and the carrying out of necessary testing, inspection and research. Those who install plant also have a duty to ensure that it is safely installed.

Section 7 places duties on employees to take reasonable care to ensure that they do not endanger themselves or anyone else who may be affected by their work activities; and to cooperate with employer and others in meeting statutory requirements.

Section 8 places a duty on everyone not to misuse anything provided in the interests of health or safety at work under a statutory requirement.

Section 9 provides that no employer may charge his employees for anything done or equipment provided for health or safety purposes under a statutory requirement.

Section 28(8) requires HSE inspectors to supply certain information on health, safety and welfare matters affecting safety, etc, to workers or their representatives.

SAFETY POLICIES

Section 2(3) of the Act requires any employer who employs more than five workers to prepare and keep up to date a written statement of health and safety policy and to bring the statement (and any revision of it) to the attention of her/his employees. The idea of the safety policy statement is that it should be specific to the undertaking and should set out the organisation (people) and arrangements (procedures) necessary to ensure a safe and healthy place of work. The statement, which should include a statement of intent from the employer, is important because it constitutes a basic action plan on health and safety which all employees should read, understand and follow. Quite apart from satisfying the legal requirement, a well thought out health and safety policy, which has been prepared in consultation with safety representatives, can bring real benefits. It can include appendices on major sources of risk and standards and procedures that apply in particular departments and it can make clear who is responsible for ensuring health and safety.

ENFORCEMENT

The Act created a new unified enforcement body - the Health and Safety Executive (HSE) and gave health and safety inspectors new powers. Because the Act applies to all workers (except domestic servants) it can be enforced in practically all workplaces. Some of these such as shops and offices are covered by local authority environmental health officers. The enforcement authority for schools, colleges and universities is the Health and Safety Executive.

The Act provides for three main systems of compulsion on employers to provide and maintain a safe and healthy place of work - Improvement Notices, Prohibition Notices and prosecution.

When an inspector serves an Improvement Notice, the employer is required to take action to comply with a legal requirement, for example to undertake a risk assessment, and the employer is given a specified time to complete the required actions (the employer must be given at least 21 days. A Prohibition Notice may be issued where there is serious risk of personal injury from a work activity or process. A Prohibition Notice stops the dangerous activity or process, for example in the circumstances where an employee is working at height without any protective barriers or measures to prevent a fall.

Appeals against Notices must be made to an industrial tribunal. An appeal can lead to a stay of execution of an Improvement Notice, but there can be no delay in the implementation of a Prohibition Notice.

Non-compliance with Notices constitutes an offence and could lead to a maximum fine of £20,000 and/or 6 months imprisonment on summary conviction, or an unlimited fine and/or up to two years imprisonment if convicted following indictment.

INFORMATION FROM HSE

Section 28(8) of the Act requires HSE inspectors to give employees or their representatives certain factual information about the workplace which they have obtained by use of their powers under the Act. Inspectors must also inform employees of the action(s) they have taken or propose to take as a result of their inspection of the workplace.

Under Section 28(8) however, inspectors are prohibited from disclosing information which may be confidential to the employer, e.g. trade secrets, to safety representatives. This can mean that exactly what information should be provided can be a matter of judgement for inspectors. If confidential information does have to be passed on, the inspector has to explain the legal position to safety representatives who, nevertheless, remain free to use such information in discussions with management and their own members. The importance of Section 28(8) therefore is that it gives workers and their representatives a statutory right to information such as legal standards and guidance about particular hazards, the results of HSE surveys or investigations (e.g. occupational hygiene monitoring) and enforcement action by inspectors. The Safety Representatives and Safety Committees Regulations 1977 give further details on receiving information (See Chapter 4).

HSC/BOARD OF HSE

The Health and Safety Commission was established on October 1, 1974 and was made up of an independent chairperson and nine other members. On the 1st April 2008 the HSE and HSC merged and the united body is called The Health and Safety Executive (HSE). This body has overall responsibility for the control and development of occupational safety and health in Britain. The new 'Board' of the HSE is responsible for the activities of the HSE. The chairperson is appointed by the Secretary of State for Work and Pensions and there are three TUC members, three CBI members, three from local authorities and professional bodies. One of the main responsibilities of the HSE is the development of new proposals for health and safety legislation and guidance. The Board advises ministers when it has reached agreement on new measures but it in turn is advised by a series of advisory committees. The TUC co-ordinates the work of trade union representatives who sit on these committees. The aim is to obtain improvements in health and safety law and standards.

EUROPE AND HEALTH AND SAFETY

The European Union (EU) is now the most important source for UK legislation on health and safety.
Since 1990, European governments have interpreted EU Directives into their own Health and Safety Legislation. In the UK these are:

- Regulations – made under the Act and legally binding.
- Approved Codes of Practice (ACoP) – issued by the HSE. An ACoP does not have the force of law but courts will view them as standards to be achieved by employers and industries.
- Guidance – produced by HSE.

Examples of UK Regulations which implement the requirements of EU Directives:

- The Management of Health and Safety At Work Regulations 1999
- Workplace (Health, Safety and Welfare) Regulations 1992 (as amended)
- Display Screen Equipment Regulations 1992 (as amended)
- The Provision and Use of Work Equipment Regulations 1998
- Personal Protective Equipment Regulations 1992
- Manual Handing Regulations 1992 (as amended)

HEALTH AND SAFETY LAWS FROM EUROPEAN DIRECTIVES

Common Features

EU member states, employers and trade unions all have an interest in setting common European standards. Health and Safety law from Europe has some common features which present unions in the UK with opportunities and challenges.

The main common features are:

- the emphasis on prevention of exposure rather than use of protective equipment.
- health and safety arrangements to cover all workers.
- employers to carry out risk assessments that identify hazards, risks and their consequences.
- monitoring and control of hazards.
- appointment of competent persons.
- consultation and information for employees.
- health surveillance.
- record keeping and regular reviews.

PREVENTION

The principal of prevention emphasises that all hazards should be avoided by controlling them at source through proper design and use of the whole work system. Most accidents are caused by badly designed and managed work systems which will eventually injure or cause ill health to anyone exposed to them for long enough. Carelessness is seldom the cause. Work should be adapted to suit the individual when designing, selecting equipment and introducing methods of work. Workers should be able to do their job safely and comfortably and protective equipment should only be used as the last resort. Risk assessments will highlight
hazards and risk and preventative and protective measures should follow the principles set out in ACoP to the Management of Health and Safety at Work Regulations (MHSWR):

(a) *it is always best if possible to avoid a risk altogether e.g. by not using or stocking a particular dangerous substance or article if it is not essential to the business;*

(b) *combat risks at source, rather than by palliative measures. Thus, if the steps are slippery, treating or replacing them is better than providing a warning sign;*

(c) *wherever possible, adapt work to the individual especially as regards the design of workplaces, the choice of work equipment and the choice of working and production methods, with a view in particular to alleviating monotonous work and work at a predetermined work rate. This helps reduce possible adverse effects on health and safety;*

(d) *take advantage of technical progress, which offers opportunities for improving working methods and making them safer;*

(e) *risk prevention measures need to form part of a coherent policy and approach having the effect of progressively reducing those risks that cannot be prevented or avoided altogether and which will take account of the way work is to be organised, working conditions, the working environment and any relevant social factors. Health and Safety policies required under HASAWA should be prepared and applied by reference to these principles;*

(f) *give priority to those measures which protect the whole work-place and all those who work there, and so yield the greatest benefit, i.e. give collective protection priority over individual measures;*

(g) *workers, whether employees or self-employed, need to understand what they need to do;*

(h) *the avoidance, prevention and reduction of risk at work needs to be an accepted part of the approach and attitudes at all levels of the organisation and to apply to all its activities, i.e. the existence of an active health and safety culture affecting the organisation as a whole needs to be assured.*

RISK ASSESSMENT

Under the **MHSWR** the employer must make an assessment of risks to the health and safety of employees whilst at work, or, in the case of self-employed persons, the risks to themselves. This is extended to specifically include the risks of new or expectant mothers, i.e. women who are pregnant, who have recently given birth or who are breast feeding. The purpose of the assessment is to enable the identification of actions necessary to comply with the requirements of any relevant statutory provision. An assessment must also be made of any risks to the health and safety of non-employees as a consequence of work activities.

Many other regulations require specific assessments to be carried out for example, the **Manual Handling Regulations, Personal Protective Equipment at Work Regulations, Display Screen Equipment Regulations** and the **Provision of Work Equipment Regulations**.

Risk assessments are the responsibility of the employer. They should be carried out and recorded where five or more people are employed. There is no single way to design and carry out a risk assessment, but where there is similarity of activities, hazards and risks (even if present in different physical areas or workplaces) a general risk assessment can be made which covers their basic features. This is known as a ‘generic’ or ‘model’ assessment. There are likely to be situations in specific areas or on specific occasions when such an assessment will not be sufficiently detailed and there may also be work situations where hazards associated with particular situations will be so unique that a special assessment must be made every time the work is done.

A risk assessment does not have to be duplicated in order to satisfy an identical requirement under a different set of Regulations. For example, where an assessment under Regulation 3 of the MHSWR has identified a noise hazard, and a noise assessment has already been undertaken in accordance with the Noise at Work Regulations 2005, no duplicate action is necessary under the MHSWR, although the noise assessment should be reviewed to ensure its validity, and the records cross referenced between the two requirements.

An assessment must be reviewed when there is a significant change in work or the work environment, or in the light of subsequent experience or at least once every 5 years. However, in practice periodic review and monitoring will be necessary to ensure that control measures are being used and that these are fully effective.

Identification of Hazard and Risk

The MHSWR says that a risk assessment should be ‘suitable and sufficient’. This means it should:

- correctly and accurately identify a hazard;
- disregard inconsequential risks and those trivial risks associated with life in general;
- determine the likelihood of injury or harm arising;
- consider the severity of the consequences and the numbers of people who would be affected;
- take into account any existing control measures;
- identify any specific legal duty or requirement relating to the hazard;
- provide sufficient information to enable the employer to decide upon appropriate control measures, taking into account the latest scientific developments and advances; and
- enable the employer to prioritise remedial measures.

According to the ACoP, the record should contain a statement of significant hazards identified, the control of measures in place and the extent to which they control the risk (cross-reference can be made to manuals and other documents), and the people exposed to the risk.

It is easy to confuse the terms hazard and risk. A HAZARD can be defined as something with the inherent potential to cause harm or injury. RISK can be defined as the likelihood of harm or injury arising from a hazard. The EXTENT OF THE RISK is the number of people who might be exposed and the consequences for them.

Examples of hazards and the associated risks include:

- handling of chemical substances - there may be a risk of exposure to the chemical;
- walking upon floor surfaces - there may be a risk of slips, trips or falls;
- climbing up or down ladders - there may be a risk of falling from, or collapse of, the ladder; and
- use of electrical equipment - there may be a risk of electrical shocks or burns

Another way of defining risk is that it is the probability that a hazard will result in an accident with definable consequences. In a wider sense, risk is the product of the severity of the consequences of any failure and the likelihood of that failure occurring.

Inspection reports both internal and externally produced, accident reports and standards can help identify areas of hazard and risk. The likelihood of risk and their consequence are often described in a priority order as low (L); medium (M); and high (H), which may be qualified by a further definition, for example:

Likelihood of Occurrence (Probability)

LOW	-	remote or unlikely to occur
MEDIUM	-	will occur in time if no preventive action taken
HIGH	-	likely to occur immediately or in near future

Consequence (Severity)

LOW	-	may cause minor injury/illness/damage - no lost time
MEDIUM	-	may cause lost time/injury/illness
HIGH	-	may cause serious or fatal injury/illness

Ranking Hazards by Risk

Some assessments rank hazards by risk. Ranking produces a priority list of hazards to be controlled, on a ‘worst first’ basis. It takes account of the consequence (likely severity) and the probability of the event occurring. Estimation of the first is easier than the second, as data may not be available for all hazards. Estimates derived from experience can be used. It is possible to carry out ranking using a simple formula, where *risk = severity estimate x probability estimate*. These estimates can be given any values, as long as they are consistently used.

Safety Reps should not see these types of assessment as fool proof, because all numerical ranking systems are purely subjective in the numerical values given to

each hazard. They are only given here as an example to illustrate one type of risk assessment among many methods that Safety Reps may come across.

"Five Steps to Risk Assessment"

An extract from the HSE's free leaflet "5 Steps to Risk Assessment" suggests a step by step approach to the task. It emphasises the need not to be too complicated and that some assessments may already have been made and will not have to be made again as long as they are logged on the risk assessment form. It is useful for Safety Reps to understand the HSE approach in order to be able to check their management's response and whether it is 'suitable and sufficient'. The Five Steps are:

(1) Identify the hazards (i.e. anything with the potential to harm)

(2) Identify who is at risk (eg employees, students, contractors etc)

(3) Evaluate the risks (i.e. examine existing control measures and decide if more should be done)

(4) Record findings (this is a legal requirement if 5 or more employees)

(5) Review (eg when necessary following changes to the work situation)

Monitoring of the implementation of the findings of risk assessments should also be part of the risk assessment process.

The Competent Person

It is the employer's responsibility to ensure that those carrying out assessments are competent to do so. The assessor should have an understanding of the workplace, an ability to make sound judgments, and knowledge of the best practicable means to reduce those risks identified. Competency does not require a particular level of qualification but may be defined as a combination of knowledge, skills, experience and personal qualities, including the ability to recognise the extent and limitation of one's own competence. These requirements should also extend to consultants and specialists outside the firm who the employer may use to help with the assessment.

Though employers can delegate other people to help them with the assessment, they cannot delegate responsibility for their assessment duty. **It is not the Safety Rep's job to carry out risk assessments on behalf of the employer.**

Consultation and Information

Risk assessments will be more effective and relevant if Safety Reps are involved from the earliest stages. Safety Reps can ensure that the method of risk assessment adapted contains the right questions, in appropriate language that truly

reflect the hazards and risks. They can also ensure that the assessment is manageable and not too complicated for employees to understand.
The Safety Rep can also play an important role in explaining the purpose of risk assessments to the workforce and receive information about jobs and processes that might easily be overlooked. **See Chapter 27 for EIS Guidance on Risk Assessment.**

Health Surveillance

Risk assessments should identify circumstances where health surveillance is required. Health surveillance is required where there is an identifiable disease or health condition related to the work and a technique for its identification. Examples where these conditions may apply are vibration white finger, noise induced hearing loss and forms of work-related upper limb disorders. Health surveillance is also a requirement under the Control of Substances Hazardous to Health Regulations (COSHH) and is most often used where employees are exposed to chemicals or other hazardous substances.

Record-keeping and Reviews

An assessment should be supported by accurate record keeping (a legal requirement where there are more than five employees) except where the assessment is simple and can be easily repeated.

Records can be kept on paper or by electronic means provided that they are retrievable. They may be kept separately or can form part of the same document as the health and safety policy. Records may have to be kept for a prescribed minimum period under specific Regulations.

Risk assessments must be reviewed to ensure their validity, or when reports indicate that they may no longer be valid. It is important to remember that fresh assessments will be required when the risks themselves change as conditions change, and also when new situations and conditions are encountered for the first time.

Safety Reps can use Safety Committee meetings to check contents, monitor progress or review risk assessments.

USING HEALTH AND SAFETY LAW

Knowing how to use health and safety law is important in order to be able to show management and fellow workers which legal standards apply in the workplace. However, the law does not always provide a readymade answer to every health and safety problem. Many safety laws are worded as broad general duties, meaning that unions need to reach agreement with management on what any laws mean in practice.

It is important to remember that legal standards vary in their strictness. Some duties are absolute and allow no room for manoeuvre. Some apply only if ‘practicable’ which gives the opportunity for the employer to argue that a requirement is not

technically possible, and some are qualified by the words 'reasonably practicable'. This latter qualification means that a judgement has to be made (ultimately by a court) between risks on one hand and, on the other, the amount of time, money and effort necessary to control them. 'Reasonably practicable' duties, as well as those that are qualified by words such as 'adequate' and 'appropriate', can be harder to enforce and in such cases reference needs to be made to other sources of standards such as relevant Approved Codes of Practice, HSE guidance notes or standards.

SUMMARY OF HEALTH AND SAFETY LAW

Act of Parliament

	Which aspects dealt with	Which jobs covered	Notes
Health and Safety at Work Act 1974	All health, safety and welfare hazards, none dealt with specifically Enforcement. Duties of self-employed people, landlords, suppliers and manufacturers.	All except domestic servants in private households and members of the armed forces.	See HASAWA for more details. For regulations made under the Act see below.

Regulations

	Purpose	Notes
Safety Representatives and Safety Committees Regulations 1977	The appointment, rights and functions of Safety Reps, the operation of safety committees.	See Chapter 3.
Health and Safety Information for Employees Regulations 1989	Display of summary of main legal requirements in poster form, or distribution to all employees in a leaflet.	Poster/leaflet must contain the address of the local office of the HSE and EMAS.
Management of Health and Safety at Work Regulations 1999	How the employer is required to manage the health and safety of the workplace.	Imposes duties on the employer to carry out risk assessments, monitor and review systems and procedures, conduct health surveillance, appoint competent persons, deal with serious/imminent danger, provide information and training. Contains ACoP and Guidance. Includes provisions for new and expectant mothers as a result of the Pregnant Workers Directive.

	Purpose	Notes
Workplace Health, Safety and Welfare Regulations 1992 (as amended)	Nearly all aspects of work including space, hot, cold, canteen facilities, floors, seating, ventilation, toilets and washing facilities.	ACoP and Guidance provides details. See Chapter 7.
Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 1995	Rules about the recording and reporting of accidents, diseases and dangerous occurrences.	Definition of an injury includes those arising from acts of violence. See Chapter 6.
Health and Safety (First Aid) Regulations 1981	All aspects of first aid.	Includes ACoP and Guidance. See Chapter 8.
Provision and Use of Work Equipment Regulations 1998	The safety of machinery apparatus, tools.	
Personal Protective Equipment (PPE) Regulations 1992	Provision and use of PPE.	See Chapter 19.
Construction (Design and Management) Regulations 2007 (CDM)	Places duties on clients, planning supervisors, principal contractors, designers and contractors to plan, co-ordinate and manage health and safety on construction sites.	Applies to a notifiable construction work lasting at least 30 days or involving more than 500 person/days of work and to non-notifiable work involving 5 or more persons on site at one time.
Electricity at Work Regulations 1989	All aspects of electrical safety.	Should be read in conjunction with a detailed “memorandum of guidance” which contains specific standards. See Chapter 16.
Ionising Radiation Regulations 1999	All aspects of ionising radiation exposure arising out of work activity.	Approved Code of Practice contains detailed requirements. See Chapter 17.
Manual Handling Operations Regulations 1992 (as amended)	The prevention of injury from lifting, pushing, pulling, carrying or moving.	Specific type of risk assessment is required where there is a risk of injury from a handling activity. See Chapter 18.
Noise at Work Regulations 2005	Noise measurement and control issue of hearing protectors, marking of noisy areas, audiometry.	Extensive Guidance Notes covering implementation of the regulations, including engineering/design of noise control methods. See Chapter 17.
Control of Lead at Work Regulations 1998	All aspects of work with lead or exposure of lead.	See Chapter 12.

	Purpose	Notes
Control of Asbestos at Work Regulations 2012	All aspects of control of asbestos including: identification; control limits; planning; assessment; and washing facilities.	Need to be read in conjunction with the ACoP and a wide range of HSE Guidance Notes. See Chapter 11.
Control of Substances Hazardous to Health Regulations 2002 (as amended)	All aspects of control of substances hazardous to health including chemicals, dust, micro-organisms and dangerous pathogens	Use in conjunction with Approved Code of Practice on biological implications, general COSHH ACoP and Carcinogens ACoP and HSE guides on COSHH assessments. See Chapters 12, 13 and 14.

4. *SAFETY REPRESENTATIVES AND COMMITTEES*

The Safety Representatives and Safety Committees Regulations 1977 (SRSCR) gave trade unions the legal right to appoint workplace Safety Reps. See Chapter 27 for the HSE Guide to Consultation and the SRSCR Regulations. The Health and Safety (Consultation with Employees) Regulations require employers to consult with all those employees who are not represented by union Safety Representatives. Employees have the right to be consulted in good time - directly or indirectly through their representatives - regarding:

- any proposed new measures which may substantially affect their health and safety;
- the appointment of people competent to advise employers under the Management of Health and Safety at Work Regulations;
- required health and safety information;
- health and safety training arrangements; and
- health and safety consequences of introducing new technology.

Although the law gives basic legal rights to Safety Reps, in practice these rights are only put into operation through negotiation and agreement with employers. This is recognised by the Health and Safety Commission (HSC) Guidance on Safety Reps and Safety Committees which states that employers and unions should make full and proper use of existing agreed industrial relations machinery to reach agreement on implementation of the SRSCR.

- Good union organisation makes it possible to secure improvements which go beyond the minimum rights and entitlements in the SRSCR.

WHO APPOINTS SAFETY REPS?

Independent trade unions recognised by employers have the right to appoint Safety Reps. Each union determines its own arrangements for appointment. It is not a matter for employers. In most cases Safety Reps are elected by the members they are to represent. Their union, of course, has to approve of their appointment. The employer must also be told in writing which group or groups of employees the appointed Safety Rep represents.

WHAT CAN SAFETY REPS DO?

Safety Reps are health and safety problem solvers taking up any matter which relates to health and safety on behalf of employees with the employer. They are given this function by HASAWA (Section 2.4-6). Their duties are given in detail in Reg 4(1) of SRSCR:

(a) to investigate potential hazards and dangerous occurrences at the workplace (whether or not they are drawn to her/his attention by the employees s/he represents) and to examine the causes of accidents at the workplace;

(b) *to investigate complaints by any employee s/he represents relating to the employee's health, safety or welfare at work;*
(c) *to make representations to the employer on matters arising out of sub-paragraphs (a) and (b) above;*
(d) *to make representations to the employer on general matters affecting the health, safety or welfare at work of the employees at the workplace;*
(e) *to carry out inspections in accordance with Regulations 5, 6 and 7;*
(f) *to represent the employees s/he was appointed to represent in consultations at the workplace with inspectors of the HSE or any other enforcing authority;*
(g) *to receive information from inspectors in accordance with section 28(8) of HASAWA; and*
(h) *to attend meetings of safety committees where s/he attends in her/his capacity as a Safety Rep in connection with any of the above functions; but without prejudice to sections 7 and 8 of HASAWA, no function given to a Safety Rep by this paragraph shall be construed as imposing any duty on her/him.*

Safety Reps therefore do not merely react to problems, they have broad powers to monitor the health and safety situation and keep members' health and safety interests under review. All issues that arise can be discussed with the employer but although the employer must listen to and consult the Safety Rep, there is no legal means of insisting that the Safety Rep's advice must be acted upon.

INSPECTIONS

A major part of the Safety Rep's job is carrying out inspections. Safety inspections provide a useful opportunity to carry out a full-scale examination of all or part of the workplace, including the inspection of documents required by health and safety legislation such as certificates concerning the testing of equipment.

Following an inspection, Safety Reps should complete an inspection report, recording the date, time and details of an inspection. One copy of the completed form should be sent to the employer and one copy should be retained by the Safety Rep. (See Chapter 4 for further information).

RISK ASSESSMENTS

Safety Reps should not confuse workplace inspections with risk assessments. Inspections only seek to identify hazards and problems. Risk assessments are more wide ranging and identify hazards, evaluate the risks, record the findings, recommend precautions and review progress.

The SRSCR do not cover Safety Reps' involvement in risk assessments. Management is legally responsible for carrying out risk assessments but Safety Reps should participate in the planning and review stages of risk assessments to ensure that procedures and improvements are working effectively.

INVESTIGATIONS

Under the SRSCR, Safety Reps are also allowed under the Regs to investigate:

- potential hazards;
- dangerous occurrences;
- causes of accidents and occupational ill-health; and
- complaints from members.

Safety Reps could therefore - immediately and without formal notice of an inspection - investigate imminent risks.

MAKING REPRESENTATIONS

The SRSCR gives Safety Reps the right to make representations as follows:

- to the employer about potential hazards or about members' complaints;
- to the employer on behalf of all employees as regards general health, safety or welfare matters at work;
- to bring to the notice of the employer their findings and complaints after inspections; and
- to represent members in workplace consultations with HSE inspectors.

RECEIVING INFORMATION

Under the SRSCR, Safety Reps are entitled to receive full information from their employers to enable them to carry out their functions. The employer can refuse information if giving it:

- endangers national security
- breaks the law;
- breaks confidentiality without the individual's permission;
- harms the business (excepting its impact on health and safety); or
- is in connection with legal proceedings

Under Section 28(8) of HASAWA, HSE inspectors have a duty to disclose specific kinds of information to employees or their representatives concerning their health or safety or welfare at work. This information includes any measurement testing, the results of sampling or monitoring and any action which the inspector takes or proposes to take, for example prosecutions, the issue of Improvement or Prohibition Notices, or warning letters to employers.

Safety Reps should try to ensure that they are informed by the employer when an HSE inspector visits the premises. When the HSE is in the workplace, Safety Reps should ensure that they are given the opportunity to speak privately with the inspectors.

Safety Reps can also seek advice from the Employment Medical Advisory Service under Section 55 of HASAWA.

ABSENCE OF LEGAL LIABILITY

Under SRSCR, Safety Reps are given a number of legal functions which their employers should allow them to carry out. But Regulation 4 states that they cannot be prosecuted for failing to carry them out, or for only partly carry them out. Safety Reps are not legally responsible for health, safety or welfare at work and they cannot be liable in either criminal or civil law for anything they may do, or fail to do, as a Safety Rep.

This protection does not absolve Safety Reps from their general responsibility as an employee but it does ensure that their responsibility has not increased because of their appointment. These duties are to take reasonable care of their own health and safety and that of others, and to co-operate with employers to enable them to carry out their statutory duties.

PROTECTION FOR SAFETY REPS AND EMPLOYEES

The Employment Rights Act 1996 (Section 44 and Schedule 100) strengthens the position of Safety Reps and employees. Safety Reps are protected from detriment or dismissal for carrying out their designated functions. They and other employees are also protected:

- if they leave or propose to leave the workplace in circumstances of serious and imminent danger; or
- if they take or propose to take action against serious and imminent danger.

This Section of the Act adds Section 22A and 57A to the Employment Protection (Consolidation) Act 1978 and protection is available regardless of length of service, hours of work or age. The rights are enforceable through industrial tribunals.

FACILITIES FOR SAFETY REPS

During formal inspections, employers are required to furnish reasonable 'facilities and assistance' to Safety Reps which they may reasonably require for the purpose of carrying out inspections. These are not specified in the SRSCR, the ACoP or Guidance.

The TUC believes that the following facilities, recommended by the Advisory, Conciliation and Arbitration Service (ACAS) *Code of Practice on Time Off for Trade Union Duties and Activities,* should also be made available to Safety Reps:

- **accommodation**
  (eg use of suitable room for reporting back to and consulting with members);
- **equipment**
  (eg a room and desk at the workplace, facilities for storing correspondence, access to internal and external telephones, typing and duplicating facilities, provision of notice boards); and
- **names of new workers.**
  Other facilities should include copies of all relevant Acts, Regulations, ACoPs and Guidance; and copies of all legal or technical standards which are relevant to the

workplace as well as information on plant, equipment and substances used in the workplace. Further facilities may be the subject of negotiations.

THE RIGHT TO PAID TIME OFF WORK

Under the SRSCR, all Safety Reps have the right to paid time off work in order to:

- carry out their safety functions; and
- undergo TUC or union training courses for Safety Reps in accordance with the ACoP.

The SRSCR do not give Safety Reps the right to demand a specified period off work. This would have to be negotiated with employers. But the ACoP is designed to assist Safety Reps in these negotiations.
If an employer refuses a safety rep paid time-off for training or to carry out their safety functions, the Safety Rep may complain to an industrial tribunal. If your employer appears unwilling to allow you this right, contact your union immediately.

DETAILS OF THE CODE ON TIME OFF

As soon as possible after their appointment, Safety Reps should be allowed time off with pay to attend basic training approved by the TUC or by the independent union or unions which appointed them. Further training should be undertaken when the need arises. This may involve refresher courses or further training on specific hazards such as noise, chemicals or new technology.

The amount of time required for training cannot be rigidly prescribed. But basic training should teach new Safety Reps about their functions under the SRSCR, helping them understand their role and that of safety committees. It should also instruct them about trade union policies and practices regarding:

- the legal requirements relating to the health and safety at work, with particular to the groups whom they represent;
- nature and extent of workplace hazards, and measures available to eliminate or minimise them; and
- the health and safety policy of their employer and the arrangements for fulfilling that policy.

SAFETY COMMITTEES

When at least two Safety Reps have put their request for one in writing, an employer must set a safety committee up within three months.

During this process, the employer must consult the Safety Reps who made the request and the representatives of recognised trade unions whose members work in any workplace to be covered by the committee. A notice must be prominently displayed, stating the composition of the committee and the work areas that it will cover.

The Guidance to the SRSCR states that working out the size, shape and terms of reference of a safety committee must depend on discussion and agreement between employers and unions. It recommends:

- committees should be compact;
- there should be 50/50 management and union representation; and
- safety advisers, doctors and other health and safety professionals should be ex-officio members.

Safety Committees could also provide a link with the enforcing authorities.

Agenda items for safety committees might include:

- studying accident and ill health trends;
- examining safety inspection reports;
- considering information from inspectors, unions, employer and industry bodies;
- discussing reports from Safety Reps;
- developing safe systems of work;
- examining the health and safety implications of new plant, equipment and processes;
- reviewing the health and safety content of employee training;
- monitoring the effectiveness of the employer's health and safety services;
- reviewing risk assessments; and
- reviewing the operation of the employer's health and safety policy and making an annual assessment of health and safety performance, problems and future priorities.
- reviewing the effectiveness of health and safety information and publicity materials.

The measure of a good safety committee is whether or not it can secure change. If it is only talking shop, or never takes any decisions, or the same items appear again and again on this agenda, Safety Reps should take action to put it right - for example by:

- making sure meeting dates are agreed in advance and only postponed by joint agreement;
- making sure that a senior person with managerial health and safety responsibility is committed to being present (this person should be named in the employer's health and safety policy - the TUC would suggest a Board member or Director);
- seeing that the right items are regularly on the agenda;
- making sure that named people are given the responsibility for actions and are committed to a completion date; and
- making sure the minutes are issued promptly, are well displayed and reflect fairly the discussions, decisions and agreed timetables for action.

One of the most frustrating experiences for a Safety Rep is to be part of a weak or poorly-organised safety committee. Safety Reps should make sure that safety committees have the power to improve health and safety at the workplace. Committees should not be used as a means for employers to avoid taking action.

CONSULTATION, INFORMATION AND REPRESENTATION FOR NON-UNION MEMBERS

Under The Health and Safety (Consultation with Employees) Regulations 1996, employees who do not belong to a trade union and who are not covered by trade union Safety Reps must be consulted by their employers. Employers can choose to consult everyone individually or consult via representatives (Representatives of Employee Safety) elected by groups of employees. When organising the "election", employers may take into account:

- the total numbers to be represented;
- the different groups (divided by occupation, local, type of work or shift patterns); and
- the nature of the work activities and its impact on their health and safety.

Under HSCER 1996, elected representatives of non-union employees have the same basic functions as union Safety Reps. And they have the same basic legal rights to:

- consultation (HSCE Reg 6);
- training (with paid time off, endorsed if necessary by industrial tribunal) (Reg 7);
- facilities (including lists of employees in their group, secretarial support, and reasonable opportunities to discuss health and safety issues with management (Reg 7);
- time-off with pay to carry out representative duties (Reg 7); and
- no harassment (Reg 8)

Elected reps do not have statutory rights to inspect the workplace, investigate accidents or request a safety committee.

5. *INSPECTIONS: CHECKLIST AND REPORT FORMS*

The following checklist is intended to be a guide for any inspection carried out by EIS Safety Reps in school, college or university premises.

Under the SRSC Regulations Safety Reps are entitled to carry out an inspection once every 3 months or if there are significant changes to the workplace which a make an inspection necessary. At the very least the aim should be to complete a full inspection at least once in every year. Safety Reps should request time-off to carry out the inspection and a member of management should be invited to participate with the Rep in the inspection process. The management representative could be either the designated health and safety officer, or equivalent, or a member of the senior management team.

Advice for Safety Reps:

When carrying out an inspection you can use the EIS Checklist (over page), risk assessment findings and the safety policy as guides. You should check that all the arrangements detailed in the safety policy are being implemented and that the safety precautions and procedures identified in the risk assessments are being complied with. It is important to ask your colleagues for their views on the safety precautions in place, work place conditions and welfare facilities.

You do not need to know every health and safety regulation to carry out an effective inspection. You do need to be thorough, inquisitive and persistent and be able to apply common sense.

In situations where concerns are raised ask yourself the following; “Could this activity/condition/situation cause harm to anyone?” If harm could arise then consideration should have been given to what could be done to either remove or reduce the risk. Ask to see copies of risk assessments, particularly for higher risk activities, eg for handling chemicals, and request to see inspection reports, eg for lifts or other lifting equipment. You are entitled to see these.

The Checklist is a guide to what to look for and what questions to ask. In addition to this you should refer to the general requirements for the workplace which are detailed in Chapter 7. There are many more questions you may wish to ask and, as a Safety Representative, the management representative who accompanies you should answer your questions or find the necessary information for you.

Remember that as a Safety Representative you have the legal right to carry out health and safety inspections.

CHECKLIST

Place/Area Inspected: _____ Date: _____

		Please Tick
A.	**General**	
1.	Have you a copy of the health and safety policy for your establishment?	☐ ☐
2.	Are you kept informed of all accidents, incidents and findings of risk assessments?	
3.	Are there notices posted in the establishment giving details of emergency procedures in the event of a medical emergency or fire?	☐
	(There is also a legal requirement to display the Health and Safety poster which gives details of employees' rights under health and safety law and contact details for the enforcing authority. This should be displayed.)	
B.	**Workplace (For all areas including offices and ICT rooms)**	
4.	Are the premises kept clean and in a good state of repair?	☐
5.	Is there adequate ventilation, lighting, heating, welfare facilities?	☐
	(See Chapter 7 for legal requirements.)	
6.	Are all floor surfaces suitable and free from slip or trip hazards?	☐
	(See Chapter 7 for detailed guidance.)	
7.	Are all the stairways fitted with a sound banister or rail? Are they adequately lit?	☐ ☐
8.	Are there any light-bulbs in need of replacement?	☐
9.	Is the heating system (including radiators in rooms) kept in good order and regularly serviced?	☐
10.	Are the steps, doors and other fixtures and fittings in good repair?	☐
11.	Are windows on the first floor or above designed of fitted with restrictors to prevent persons falling from them?	☐
	Is there a window pole easily available for opening/closing high windows?	☐
12.	Do doors with glass windows have wire reinforcing or made of safety glass?	☐
13.	Do all computer workstations and display screen equipment comply with the requirements of the Display Screen Equipment Regulations? ***(See Chapter 22 for details of requirements.)***	☐
C.	**Fire Safety**	
14.	Are all fire exits or escape routes clear and unblocked?	☐
15.	Are highly flammable substances stored away from sources of heat?	☐

16. Do the fire alarms work and can they be heard everywhere? ☐
(NB. Ask for the routine tests of the alarm system to coincide with your inspection.)

17. Have the fire extinguishers been maintained and checked in accordance with the manufacturer's recommendations? ☐
Are there enough extinguishers easily available in the event of fire? ☐

18. Are all fire doors properly closed? ☐

19. Are all staff (including visiting specialists or temporary staff) and students familiar with the evacuation procedures in the event of fire? ☐

20. Has there been a practice evacuation (fire drill) this term? ☐

D. Rooms used for teaching/lectures/music instruction

21. Look again at B.

22. Is there enough space for safe access, egress and movement around the room?. ☐

23. Is the level of light adequate for the activities undertaken in the room? ☐

E. Laboratories

24. Look again at B and D again.

25. Is there a separate, lockable store for highly flammable substances? ☐

26. Are all chemical containers labelled clearly and correctly - in particular, are highly flammable substances so labelled? ☐

27. Is the shelving for chemical storage sufficiently strong, sound and properly fixed to the wall? ☐
Is storage space for chemicals and dangerous substances sufficient? ☐

28. Are there adequate fume cupboards - are they in proper working order? ☐

29. Are approved safety goggles provided for experiments requiring their use? ☐

30. Are electricity cables prevented from being a tripping hazard? ☐

31. Is the layout of the laboratory such as to allow for safety access/exit/circulation bearing in mind the number of students accommodated? ☐

32. Have all electrical appliances been tested (date of test should be marked on each item) within the last year? ☐

33. Is there a master switch which isolates electrical apparatus in the room? ☐

34. Are there suitable fire fighting devices available in the laboratory? ☐
Are fire blankets provided? ☐

35. Are arrangements for waste disposal satisfactory? ☐

36. Is any rubber tubing showing signs of perishing? ☐

37. Are cylinders of compressed gases stored away from heat sources and flammable substances out of direct sunlight? Are they securely fixed in brackets, clamps or trolleys? ☐ ☐ ☐

38. Are glass vessels free from chips or cracks? ☐

39. Are animal cages cleaned and disinfected? ☐

40. Are safety rules prominently displayed in laboratories? ☐

F. Technical Workshops

41. Look again at B and D.

42. Is the work shop clean and tidy with and free from tripping hazards from wires or cables? ☐

43. Have all electrical appliances been appropriately tested (check label on each appliance)? ☐
Does each electrical appliance have a wall mounted master switch for emergency cut offs? ☐

44. Is the layout of the workshop such as to allow for safe access/exit/circulation bearing in mind the number of students accommodated? ☐

45. Is there sufficient and suitable protective clothing, including approved safety gauntlets, goggles or visors where necessary? ☐
Are aprons and shoe coverings provided, particularly for metal work? ☐

46. Are all hand tools maintained in good condition? ☐

47. Is there provision for safe storage of hand tools on or near work benches? ☐

48. Are machines with moving or rotating parts adequately guarded? ☐

49. Are there automatic safety cut-out switches fitted? ☐
Are there enough? ☐
Do they work properly? ☐

50. Is exhaust ventilation available for processes giving rise to excessive dust or fumes? ☐

51. Are there suitable fire fighting devices available in the workshop? ☐

52. Is waste, wood shavings, metal swarf, etc regularly cleared away and disposed of safely? ☐

53. Are safety rules prominently displayed? ☐

G. Art Departments

54. Look again at B and D.

55. Is suitable and sufficient protective clothing available where necessary? ☐

56. Is the guillotine fitted with appropriate guards? ☐

57. Are all electrical appliances properly wired and earthed? ☐

58. Is there a safety cut-out on the Kiln? ☐
59. Are all containers, eg for glazes, suitably labelled? ☐
60. Are all hazardous substances securely stored? ☐

H. Catering Department/Home Economics

61. Look again at B and D. ☐
62. Is the layout such as to allow safe access/exit/circulation, bearing in mind the number of students accommodated? ☐
63. Have all electrical appliances been examined and tested within the last year? ☐
64. Are there suitable fire fighting devices available (particularly carbon-dioxide extinguishers and fire blankets in view of the possibility of electrical fires)? ☐
65. Are safety rules prominently displayed? ☐

I. Halls and Gymnasia

66. Look again at B and D.
67. Are securing ropes, wall bars etc sound? ☐
68. Is PE equipment stacked securely and positioned so that it does not create a hazard while other activities are being carried out? ☐
Are fixed items regularly inspected? ☐
69. If there is a stage is there a safe means for access and egress? ☐
70. Is stage lighting inspected, properly wired and earthed and stored away when not in use? ☐

J. Outside the Building

71. Are all pedestrian traffic routes free from uneven/broken/cracked paving slabs or potholes? ☐
72. Are outside steps sound and secure? Is there a firmly fixed handrail? ☐
Are steps to temporary buildings safe?. ☐
73. Are holes for goal posts, netball posts, tennis posts, etc covered when the posts are not in position? ☐
74. Are playing fields and sandpits free from glass and sharps? ☐
75. If there is a swimming pool, is the pool and the surrounding area kept clean? ☐
Is the chemical store secure? ☐
76. Is there adequate external lighting, particularly over steps, projections etc and in areas such as car parks? ☐

L. Staff Facilities

77. Is the staffroom clean, warm and well lit? ☐
78. Are there storage facilities for personal belongings? Are there adequate cloakroom facilities? ☐
☐

79. Is there sufficient seating available in the staffroom? Is it big enough for the numbers accommodated? ☐

80. Are there adequate facilities to provide hot drinks/heat food? ☐

81. Are staff sanitary conveniences and washing facilities suitable and sufficient and properly cleaned? ☐

If you have ticked all the boxes you may not have too many issues to pursue with your employer but remember that the Checklist is only a guide.

The EIS Report Form (blank copy over page) is the recommended way to raise and record the matters of concern identified during your inspection. This form may also be used to raise complaints or concerns with management. Some local authorities have agreed, with the trade unions, their own forms for raising concerns and identifying hazards and health and safety issues. Where this has not been agreed the EIS Report Form should be used.

If the agreed actions are not completed within a reasonable time you should contact your Local Association Secretary or Branch Secretary for advice on how to pursue matters further.

You should keep a copy of all your inspection reports and health and safety problems, concerns and complaints.

EIS Health and Safety Inspection

REPORT FORM

Place/Area Inspected: _____ Date: _____

Notification to the employer of unsatisfactory conditions or working practices:

		To be completed by employer's Health and Safety Officer and returned to EIS Safety Representative	
Particulars of matters of concern identified during inspection	**Location**	**Nature of remedial action taken or proposed**	**Date of completion or proposed completion**

		To be completed by employer's Health and Safety Officer and returned to EIS Safety Representative	
Particulars of matters of concern identified during inspection	**Location**	**Nature of remedial action taken or proposed**	**Date of completion or proposed completion**

This report does not imply that conditions are safe and healthy or that the arrangements for welfare at work are satisfactory in all other respects.

Signature of EIS Safety Representative _____ Date _____

Signature of Employer's Representative _____ Date _____

6. *DEALING WITH ACCIDENTS*

Every year over thousands of accidents are reported to the Health and Safety Executive and about 20% of these accidents result in serious injuries. Every year there are hundreds of fatal accidents and this includes deaths of members of the public as well as employees. The research from the HSE has shown that the financial cost to employers, employees and the UK economy is billions of pounds every year. Such figures can never indicate the scale of pain and disadvantage suffered by the injury victim. In addition, there is also an enormous pool of gradual health damage, eg musculoskeletal disorders and stress related illness.

It is that when accidents do occur they are properly recorded, reported to the authorities, and investigated. The lessons from accidents must be learned so that new preventive action can be taken to stop similar accidents or health problems happening again in the future. Injured workers should be compensated through benefits and legal action.

WHAT CAUSES ACCIDENTS?

It is often suggested that the majority of accidents are caused by careless workers, but this diverts attention from the overall system of work, focusing on mistakes made by the individual. Often this approach is closely connected with disputes about liability for accidents and payment of compensation.

When accidents are properly investigated a different story emerges. The HSE has published several reports which have analysed the causes of accidents in detail.

These all conclude that carelessness is the cause of only a small proportion of accidents - while the main cause is the employer's failure to provide a safe system of work. The MHSWR emphasise the need for a systematic approach to identify and remove hazards, control risks and inform employees. It is the responsibility of management to ensure a safe working environment.

THE LAW AND ACCIDENTS

When accidents do happen at work the law requires most of them to be reported and recorded. Safety Reps have important legal rights to investigate accidents (see Chapter 2). The Social Security (Claims and Payments) Regulations require injured workers to report accidents and employers to investigate and keep records of reported accidents. The main requirements of these regulations are detailed in the table on the next page.

The responsible person is required to report all reportable accidents, diseases and dangerous occurrences to the Incident Contact Centre in Caerphilly (tel: 0845 3009923, forms or via the internet at www.riddor.gov.uk). The Incident Contact Centre will forward all incidents to the enforcing authority, eg the area office of the Health and Safety Executive.

Requirements on workers	
Injured workers, or persons acting for them, to give employer specific details of accidents for which benefits may be claimed	*Regulation 24*
Particulars required need be no more than:	
full name, address and occupation of injured person; date and time of accident; place where accident happened; cause and nature of injury; and name, address and occupation of person giving the notice, if other than the injured person.	*Schedule 4 to Regulations*
Requirement on employers	
Employers to investigate the circumstances of every accident reported.	
Employers with more than ten workers to keep an accident book of an approved form.	*Regulation 25*
Record to be kept for a minimum of three years.	
Accident book to be readily accessible.	

Accidents which cause serious or fatal injuries or lead to more than a specified period off work have to be notified to the HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995. These require employers to notify information direct to the HSE, and to keep records. They also cover certain dangerous occurrences and a range of industrial diseases. The main requirements of the Regulations are detailed over the page.

RIDDOR 1995

Definitions

Immediately reportable accident: accident causing death or a major injury as specified in a Schedule, eg broken leg or loss of sight.	*Regulations 3(1) a,b,c and d Schedule 1*
Dangerous occurrence: event specified in a Schedule, eg a fire or explosion which stops work for more than 24 hours.	*Regulation 3(1(e)), Schedule 2*
Reportable disease: disease specified in a Schedule, eg asbestosis or occupational asthma.	*Regulation 5, Schedule 3* *Regulation 3(2)* *Regulation 4*
Reportable accident: accident resulting in the injured person being incapacitated and unable to do their normal work activities for more than seven consecutive days as the result of an occupational accident or injury. However, under EU law, employers and others with responsibilities under RIDDOR must still keep a record of all over three day injuries - if the employer keeps an accident book, then this record will be enough.	*Regulation 3(1)(a) (b), (c), (d) and (e)*
Reportable death: employee dies within 1 year from a reportable accident due to the injuries sustained from the accident.	*Regulation 5(1)*
NB. Injuries which are a result of workplace violence are reportable in the same way as those caused by accidents.	*Regulation 3(2)*
Reporting Requirements	*Regulation 7, Schedule 4*
Immediately reportable accident and dangerous occurrences: employer to notify HSE immediately and send formal report on approved form (F2508) within 10 days.	
Reportable diseases: employer to promptly notify HSE using an approved form (F2508A)	
Reportable accidents: employer to notify HSE using an approved form (F2508) within 10 days.	

Record keeping

Employer to keep specified records of all events reportable under RIDDOR. Records to be kept for at least three years.

WHAT TO DO AFTER AN ACCIDENT

Essential steps for Safety Reps:

After an accident

1. Immediately after:
   - get to the scene of the accident;
   - see that injured members are being properly looked after; and
   - make sure that nothing is moved.

2. Investigation:
   - if appropriate take photos, sketches and measurements;
   - talk to witnesses and take statements; and
   - carry out a detailed inspection.

3. Follow up:
   - check the employer's accident records;
   - suggest improvements or immediate precautions; and
   - advise injured members.

STEP 1: IMMEDIATELY AFTER

Get to the scene: the sooner Safety Reps can get to the scene of the accident the better. If an accident occurs in your own work area you will know about it. If members are dispersed over a wide area, make sure they know how to contact Safety Reps or negotiate an agreement with management to inform Safety Reps without delay of any accident.

Under the SRSCR Safety Reps have the right to carry out an accident inspection where it is 'reasonably practicable' for them to do so. Strictly speaking, under Regulation 6(1), this right only applies to reportable accidents, diseases and dangerous occurrences. However, it may only emerge that an event is reportable as a result of making an inspection, and it is not always possible to tell in advance whether the injuries caused by an accident will put a person off work for long enough to make the accident reportable. In any case, Safety Reps have a right under Regulation 4(1)(a) to examine the causes of accidents and to investigate potential hazards and dangerous occurrences.

Check first aid: it is important to make sure that all injured workers get appropriate first aid treatment or medical attention and are not rushed back to work or into making a statement. Any inadequacies in the speed with which treatment is provided should be taken up with management.

Make sure nothing is moved: it is also important to be vigilant and to prevent the scene of an accident being disturbed before an investigation has been done since it is easy for an unscrupulous employer to alter the scene of an accident before the insurance company arrives. The only acceptable reasons for moving anything are rescue and safeguarding against further hazards. This is emphasised in Guidance Notes 23 and 24 of the SRSCR: "*It may be necessary, following an accident or*

dangerous occurrence, for the employer to take urgent steps to safeguard against further hazards. If he does this, he should notify the Safety Rep of the action he has taken and confirm this is writing. The examination must not, however, include interference with any evidence or the testing of any machinery, plant equipment or substance which could disturb or destroy the factual evidence before any inspector from the appropriate enforcing authority has had the opportunity to investigate as thoroughly as is necessary in the circumstances of the accident or occurrence."

If things have been moved by the time Safety Reps arrive on the scene, a note should be made of the changes and statements should be taken to back this up. Ideally the area should be cordoned off and somebody appointed to check that nothing is moved, either by management or workers.

STEP 2: INVESTIGATION

Photos, sketches and measurements: following an accident, details provided by photos, sketches and measurements can be of crucial importance in establishing the facts. Under Regulations 5 and 6 of the SRSCR, Safety Reps have the right to perform periodic inspections and also to investigate reportable accidents and dangerous occurrences in the workplace. Such inspections and investigations can include the taking of measurements, preparing of sketches and taking photographs.
Witnesses and statements: Safety Reps also need to talk to witnesses and take statements as soon as possible after an accident. This right is backed up by Regulation 6(2). Witnesses are not obliged to give statements to anyone but it is always important for members to give a statement to their union representative and sooner rather than later while it is still fresh in their mind. Do not lead a witness - they might not be able to substantiate what they say later on. The person should be put at their ease and asked to say what happened in their own words, going slowly enough for this to be written down. If there are any points which do not make sense, they should be asked to go over these again so that it is clear what happened.

If members are called in by management to discuss, or make a statement of the circumstances of their accident they should seek the advice of their EIS Rep.

STEP 3: FOLLOW UP

Check management's records: there are several places to check: these include the accident book; the register, in which reportable injuries and dangerous occurrences must be reported; the employer's copy of Form F2508 on which a report of any dangerous occurrence and accident causing death or major injury should have been made; and the employer's own record keeping system. It is important to make sure that all details have been properly recorded and make a note of any discrepancies.

Suggest improvements: an investigation after an accident may reveal specific problems in the workplace, for example, bad lighting or lack of training. This may mean putting specific proposals to management on dealing with these problems. This should be done in writing and members should be told about action taken.

Advice: injured members need to be advised of their rights to pursue compensation claims against their employer or other negligent party. They should complete the appropriate EIS Claim Form to begin this process. Accident, Violence and Stress Claim Forms are available from Local Associations, Area Offices or from the Employment Relations Department at EIS Headquarters**.**

USING ACCIDENT RECORDS AND STATISTICS

As well as investigating the circumstances of accidents it is important to make full use of accident records, reports and statistics held by the employer. This kind of data can be used to:

- identify priorities for action - for example looking at incidence rates for different types of injury in particular departments or among particular groups;
- compare the accident rates in the workplace with HSE or employers' association figures for an industry;
- monitor improvement or deterioration in the safety record for a workplace;
- check that the remedial action decided on after an accident has been carried out; and
- find out the names of injured workers so they can be told their rights.

Safety Reps have a right of access to this kind of information under the SRSCR but management is also able to raise objections. For example, where there may be legal proceedings, management may use Regulation 7(1) and 7(2)c to argue that an accident report need not be disclosed because it has been obtained to defend the employer in a compensation case although this is only relevant where legal defence is the 'dominant purpose' of an accident report. Management may also use those Regulations to argue that health records should not be revealed because they relate to the health record of an individual who can be identified. A way round this is to get the person concerned to give written consent to the information being released.

Management should also be encouraged to keep records of all incidents requiring first aid treatment and to collect information about near miss accidents. To do this management will need their own internal reporting system and to train staff to operate the system.

NEAR MISS ACCIDENTS

A near miss accident is any incident which represents a danger although it produces no injury. Research shows that for every injury accident there are several near miss accidents, so monitoring and taking action on near miss accidents is important.

All employees should be encouraged to report dangerous incidents. Management should process near miss accidents through the normal accident reporting, recording and action system. In some cases, it can help if there is a list of types of near miss accidents which must be reported.

ILL HEALTH

Cases of ill health caused by work can be dealt with in a similar way to accidents. However, the links between work and disease are usually less obvious than between accidents and injuries and this means that different investigation technique is required. For example, if a link between work and disease is suspected, it is possible to do a short survey to find out if suspicions are justified. Management may keep records which could help such as details of ailments treated in the first aid room and sickness absence data. These sources can be used to pin-point particular problems.

IMPROVING HEALTH AND SAFETY PROCEDURES

As stressed at the beginning of this Chapter, the purpose behind investigation and analysis of accidents is to see if steps can be taken to stop them happening again and to identify weaknesses in health and safety arrangements. This means that reports on accidents, ill health and near misses should be regularly reviewed by safety committees to see what lessons can be learned. It is important that such reviews should concentrate not just on the physical causes of accidents but on organisational factors such as design and management of work systems, responsibility for safety training, supervision and information for workers. In-depth analysis of most accidents will indicate weaknesses in an employer's health and safety policy or its implementation, so Safety Reps should prepare suggestions on how these can be improved. Useful information can also be obtained from sources such as reports available from the HSE.

STATE BENEFITS

Industrial Injuries Disablement Benefit may be available if a person is disabled due to an accident at work or ill or disabled as a result of a disease or condition caused by work, see Chapter 27 for further details.

7. *THE WORKPLACE: CONDITIONS, ENVIRONMENT AND WELFARE*

The Workplace (Health, Safety and Welfare) Regulations 1992 (as amended) specify minimum standards for most workplaces including schools, colleges and universities. These Regulations expand on duties on employers under the Health and Safety at Work etc Act.

Workplace means any non-domestic premises or part of premises made available to any person as a place of work. It includes any place within the premises to which a person has access while at work and means of access to or egress from the premises. A modification, conversion or extension is part of a workplace only when completed. **A premise** means any place, including an outdoor place. The Regulations do not apply to home workers.

Workers with Disabilities

Workplaces must be suitable for all who work in them, including disabled workers. This applies especially to regulations dealing with traffic routes; seating and workstations; toilet, washing and changing facilities; rest and meal facilities. All workplaces should be as accessible as possible to disabled people and new buildings or conversions must be designed with this in mind. The requirements of the Disability Discrimination Act 1995 further information can be obtained from www.disability.gov.uk.

Risk Assessments

The MHSWR require all employers to carry out comprehensive risk assessments which will include workplaces and facilities. It is important that all aspects of working environment are taken into account when risk assessments are carried out.

LEGISLATION

SUMMARY OF THE WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002

Regulation 1 - Dates when Regulations in force
These Regulations are now in force in full.

Regulation 2 - Definition of "workplace" and "domestic premises" - see above

Regulation 3 - Application of Regulations
The Regulations do **not** apply to building sites. Temporary worksites must have, “so far as is reasonably practicable”:

- toilets and washing facilities**;**
- drinking water;
- changing facilities and accommodation for clothing; and
- facilities for rest and eating meals.

Outdoor sites must have:

- toilets and washing facilities; and
- drinking water.

Regulation 4 - Responsibilities of employers

Employers are responsible for the health and safety of their employees and others working on their premises. Before deciding that facilities are adequate, employers should take account of all employees, self-employed workers and contractors who may use them. When employees are working on other employers' worksites, their own employer still has a duty to them under HASAWA. Where employers share a workplace (temporarily or permanently) they must co-operate on health and safety, under MHSWR. Contracts and agreements between employers should include measures to comply with these Regulations.

Regulation 5 - Maintenance
The workplace, equipment, devices and systems must be maintained in an efficient state and working order, and in good repair. Where appropriate, they must be subject to a suitable system of maintenance.

Regulation 6 - Ventilation
Enclosed workplaces must be ventilated by a sufficient quantity of fresh and purified air.

Regulation 7 - Temperature
A reasonable temperature must be maintained inside buildings during working hours; a sufficient number of thermometers must be provided. The minimum temperature in a workplace is 16^{o}C unless work involving severe physical effort is taking place, in such circumstances the minimum is 13^{o}C.

Regulation 8 - Lighting
Must be suitable and sufficient, and natural as far as is reasonably practicable. Emergency lighting must be provided where lighting failure would cause danger.

Regulation 9 - Cleanliness
Workplaces and furnishing must be kept sufficiently clean. Waste materials must not accumulate, except in suitable receptacles.

Regulation 10 -Space
Work rooms must have sufficient floor area, height and unoccupied space. The minimum space requirement is 11m^{3} for each person working in the room (the volume is measured but the height measurement is limited to a maximum of 3m and the space taken up by furniture equipment should be deducted from the calculations.

Regulation 11 - Workstations
Must be suitable for the worker and work. A suitable seat must be provided where work can be carried out from a seated position.

Regulation 12 – Floors and traffic routes
Must be suitable and should not expose persons to risks by being uneven, slippery or by having holes. There should be effective means of drainage. They should be kept free, so far as is reasonably practicable, from obstructions, articles or substances likely to cause slips trips or falls. Handrails must be provided on staircases.

Regulation 13 - Falls
Suitable and sufficient measures should be taken to prevent persons falling (a distance likely to cause personal injury) or being struck by falling objects. Tanks, pits or structures, or traffic routes over such, must be securely covered and fenced where there is a risk of a person falling into a dangerous substance.

Regulations 14 - 16 - Windows
Windows and transparent and translucent surfaces must be made of safety material or protected against breakage. They must be appropriately marked or easily identified and safe when open. Persons opening, closing or adjusting windows, skylights or ventilators should be able to do so safely.

Regulation 17 -Traffic
Workplaces must be organised to allow safe circulation by pedestrians and vehicles. The safety of those working next to traffic routes should also be protected.

Regulation 18 - Doors
Doors and gates must be suitably constructed and comply with certain specifications.

Regulation 19 - Escalators
Must function safely, be equipped with necessary safety devices, and be fitted with easily identifiable and readily accessible emergency stop controls.

Regulation 20 - Toilets
Suitable and sufficient sanitary conveniences must be provided at readily accessible places. The rooms containing them should be adequately lit and ventilated and kept in a clean and orderly condition.

Regulation 21 - Washing
Suitable and sufficient washing facilities must be provided at readily accessible places.

Regulation 22 - Water
An adequate supply of wholesome drinking water must be readily accessible at suitable places and conspicuously marked and a supply of suitable cups must be provided, unless there is a drinking jet.

Regulations 23 & 24 - Clothing
Suitable and sufficient accommodation for clothing must be provided, as well as changing facilities where special clothing is worn.

Regulation 25 - Rest Rooms
Suitable and sufficient rest facilities must be provided at readily accessible places. Rest rooms and areas must include arrangements to protect non-smokers from discomfort caused by tobacco smoke. Suitable facilities must be provided for: pregnant or nursing workers to rest and for workers to eat meals where meals are regularly eaten in the workplace. An adequate number of tables and seats and suitable seating for the number of disabled workers should be provided.

THE WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 as amended:

MAINTENANCE

Regulation 5 of the Workplace Regulations states that the workplace, equipment, devices and systems must be maintained in good repair and not be a risk to health and safety. This includes:

- ventilation systems;
- emergency lighting;
- seating and workstations;
- guards to prevent falls; and
- escalators.

The ACoP that accompanies the Regs lists the following as a **suitable system of maintenance:**

(a) regular maintenance (including, as necessary, inspection, testing, adjustment, lubrication and cleaning) carried out at suitable intervals;
(b) potentially dangerous defects remedied, and access to defective equipment prevented in the meantime;
(c) regular maintenance and remedial work carried out properly; and
(d) a suitable record kept to ensure that the system is properly implemented and to assist in validating maintenance programmes.

VENTILATION

Working in unsatisfactory thermal conditions without adequate supplies of fresh air can pose problems. Unsatisfactory building design and heating systems may mean workplaces are too hot in summer or too cold in winter.

Regulation 6 of the Workplace Regs states that in enclosed workplaces, employers must provide "effective and suitable" ventilation to supply a "sufficient quantity" of fresh or purified air.

The ACoP says that ventilation systems should not cause uncomfortable draughts. Air inlets should not be situated near contaminated air, for example from vehicle exhausts or flues. Recycled air systems should be filtered and mixed with fresh air.

Workplaces where hazardous substances are used will need a higher standard of ventilation. The Control of Substances Hazardous to Health Regulations and the Control of Asbestos at Work Regulations include more specific requirements. Work in “confined spaces” such as sewers, tanks or pits also need special precautions, the Confined Spaces Regulations 1997 apply in these situations.

Fresh air standards are given in HSE Guidance and recommends that the quantity of fresh air supplied should never fall below 5 litres per second per person. The Chartered Institute of Building Services Engineers (CIBSE) suggests fresh air supply rates of 36 litres per second per person for heavily contaminated workplaces.

TEMPERATURE

Some workers face extremes of temperature, eg outdoor workers, workers in the food industry who work in cold stores and bakery or foundry workers, but for all workers the wrong temperature causes problems. People will complain of discomfort if the heating cannot cope in cold weather or if ventilation is bad when it is hot. Cold snaps, heatwaves and breakdowns pose additional problems. Working in the wrong temperature can mean loss of concentration, irritability, tiredness, discomfort and increased accident risks.

Too much heat can cause fatigue, extra strain on the heart and lungs, dizziness and fainting, or heat cramps due to loss of water and salt. Hot, dry air can increase the risk of eye and throat infections. In extreme circumstances there heat stroke can occur. Tiredness and loss of concentration can also lead to increased accident risks.

As a last resort, in unavoidably hot or cold work areas, employers should provide suitable protective clothing and rest facilities, and limit the amount of time that individuals work in these areas.

Regulation 7 of the Workplace Regs states that the ‘temperature in all workplaces inside buildings shall be reasonable during working hours.’ A ‘reasonable temperature’ is defined in the accompanying ACoP as that which provides reasonable comfort without special clothing and should normally be at least 16^{o}C or at least 13^{o}C where much of the work involves physical effort (such as repeated exertion to the extent that a temperature of 16^{o} would be uncomfortably warm). The ACoP stipulates that where maintaining these standards are impractical then employers must take all reasonable steps to achieve a comfortable temperature as close to them as possible.

Regulation 7 also states that methods of heating or cooling must not produce harmful or offensive fumes, gases or vapours, and a sufficient number of thermometers must be provided to enable workers to check temperatures in indoor workplaces. The ACoP says thermometers need not be provided in each workroom but if the temperature in a particular workroom is uncomfortable the temperature in that room should be measured.

TOO COLD:

Too much cold can mean chilblains, Reynaud's disease or white finger and frostbite. Cold conditions can also lead to fatigue since the body uses energy to keep warm. There is an increased accident risk from numb fingers, obstruction by some kinds of protective clothing, slipping on ice, etc. Extreme cold for long periods can lead to hypothermia, loss of consciousness and eventual coma.
The acceptable zone of thermal comfort for most kinds of work lies between 16ºC (60.8ºC) -24ºC (55.4ºC). The acceptable temperatures for heavier types of work are concentrated in the lower parts of this range, while sedentary tasks may still be performed with reasonable comfort towards the opposite extreme.

The School Premises (General Requirements and Standards)(Scotland) Regulations 1967 includes the following provisions for minimum temperatures in different areas within schools:

Type of Accommodation **(1)**	**Number of air changes per hour to be heated by the heating system** **(2)**	**Temperatures** **(3)**
Medical inspection room, changing room, bathroom, water closet and shower room	3	18½º (65ºF)
Teaching space, dining room, nursery room, common room and staff room	2	17ºC (62ºF)
Assembly area, lecture hall, theatre and cinema	1½	15½ºC (60ºF)
Sickroom	3	14½ºC (58ºF)
Cloakroom and corridors	2	13ºC (55ºF)
Gymnasia	1½	13ºC (55ºF)
Games hall	1	10ºC (50ºF)

When checking on compliance with these standards, care should also be taken to examine heating systems that are in use. These can cause problems of their own such as fumes, uneven temperature and draughts, dry air or too much humidity, insufficient fresh air**,** electrical hazards or fire hazards. The above standards are guidelines but are not enforced by the Health and Safety Executive. **Enforcement action would not be taken unless the temperature was less than 16ºC in classrooms, lecture theatres or other general work areas.**

If the temperature does not reach the minimum standards in any area where a teacher or a lecturer is required to work this matter should be raised with the head teacher or line manager. There are many local agreements on the actions to take if the temperature does not meet the statutory maximum, advice on this should be sought from the Local Association or Branch.

TOO HOT:

The law does not include specific standards for maximum temperatures, so reliance has to be placed on the general duties in Section 2 of HASAWA and the Workplace Regs (Reg 7 states that employers must ensure that during working hours, the temperature in all workplaces, inside buildings is 'reasonable'). The TUC is campaigning for a maximum workplace temperature of 30°C, or 27°C for those doing strenuous work. Local agreements have been reached by some Local Associations on maximum temperatures to be allowed in schools. Such agreements specify the temperature at which measures should be taken to reduce the heat in the classroom or, in some circumstances, find alternative accommodation.

The ACoP says that "all reasonable steps should be taken to achieve a comfortable temperature", for example:

- insulating hot pipes and equipment;
- providing air cooling plants;
- shading windows;
- siting workstations away from hot areas; and
- using fans and increased ventilation in hot weather.

CHECKLIST: TEMPERATURE AND VENTILATION POSSIBLE ACTION

1. One way of identifying a problem is by talking to your members or doing a survey. This may also build their support for solving the problem. You could ask them:

   - do they find it too hot or too cold at work?
   - does this happen at a particular time of year?
   - do they notice any draughts at work?
   - are there any problems with heating/cooling systems?

2. Make an inspection of temperatures and heating and cooling systems. Most workplaces tend to be too cold for comfortable working, particularly in winter. What is the average temperature in your workplace and is there a thermometer available to measure it?

3. Is the atmosphere hazy, oily, fume or dust-laden? If so:

   - are there sufficient air movements by general ventilation (windows, doors, vents)?
   - is any provision made for mechanical ventilation by fans, exhaust ventilation or other cleaning equipment?
   - are there maintenance and cleaning programmes for ventilation equipment?

4. Draw up a list of the main problems with heating and ventilation, hot work and cold work.

5.	Prepare a report for management. Set out your aims and a plan of action on temperature and ventilation problems.

Also refer to Chapter 27 for EIS advice on Working Conditions.

LIGHTING

Inadequate lighting at work can lead to eye strain, fatigue, headaches, stress and accidents. The amount of light is not the only factor as badly designed lighting systems give rise to glare. This can cause stress and headaches, as well as creating accident risks. Heavy contrasts can be dangerous as moving between bright to very dark areas can cause temporary blindness as the eyes adapt.

Lighting Problems

Common lighting problems found at work include:

- dark or unlit areas, especially near hazards such as machines or steps;
- lack of natural light because of dirty or badly placed windows;
- glare from badly positioned or poorly shaded lights or windows and reflecting surfaces;
- energy saving programmes leading to cuts in lighting levels;
- workers suffering eyestrain or fatigue from bad posture caused by poor lighting;
- dirty or poorly maintained lighting, leading to light loss, and flicker;
- unsuitable decor, leading to lower light levels, excessive contrasts or too much glare; and
- security risks at night caused by poor lighting outdoors.

Lighting problems at work can be investigated in a number of ways:

- asking workers - although many people get used to bad lighting;
- using a light meter to check against standards (see below); and
- looking for glare or asking for a full lighting survey.

Measuring Light

The level of light is measured in “lux”. Interior levels are very much lower than outdoor natural light. Some typical light levels are:

Very bright summer day	up to 100,000 lux
Overcast summer day	30,000 to 40,000 lux
‘Bad light stops play’	1,000 lux
Shady room in daylight	100 lux
Street lighting	20 lux

The amount of light can be measured by a light meter. These are readily available, though many photographic light meters are not calibrated in lux.

The employer’s duty to ensure the health, safety and welfare of employees under HASAWA includes a duty to provide adequate lighting to ensure that work can be done safely and employees’ health or eyesight is not damaged. The provisions contained in MHSWR, especially Regulation 3, risk assessment, are also relevant.

Regulation 8 of the Workplace Regs states that employers must ensure that:

(a) every workplace has suitable and sufficient lighting;
(b) this should be natural light, so far as is reasonably practicable; and
(c) suitable and sufficient emergency lighting shall be provided where needed.

The Regs do not define “suitable and sufficient” but the ACoP says that the lighting should enable people to work and move about safely and will be dependent on the tasks to be performed and hazards to be negotiated. Where natural light is utilised, windows and skylights should be regularly cleaned, although they may be shaded to reduce glare and heat. If emergency lighting is necessary for reasons of safety, it should be powered by an independent energy source to the artificial lighting. Lighting should be sufficient to enable people to work, use facilities and move from place to place safely and without experiencing eye-strain. Outdoor areas should be adequately lit after dark.

Glare

Lighting levels may be adequate but glare from a direct source or light reflected off equipment or paper can cause discomfort. Glare is light in the ‘wrong place’ and there are three different kinds. All can cause strain and fatigue and some may interfere with vision:

- **disability glare** can dazzle and impede vision, and so may be a cause of accidents - one example is the effect of full-beam car headlamps;
- **discomfort glare** is more common in work situations - it can cause strain and fatigue, especially over long periods, and is caused by direct vision of a bright light or background; and
- **reflected glare** is bright light reflected by shiny surfaces into the field of vision - its effects can be the same as those for discomfort glare.

The best way to spot the effect of glare is to identify places where a light source shines directly or by reflection into the operator’s vision. It can be harder to spot glare from light fittings when day light is present as well. Then see if screening, shading or fitting diffusers on lights makes any difference.

To reduce glare the following steps should be considered:

- adjust shades, screens or reflectors to reduce direct views of light sources;
- raise the light fittings (if suspended);
- fit diffusers around the light sources (especially if fluorescent);
- check that the right size and type of bulb or tube is being used;
- reduce the number of reflective surfaces in the workplace;
- re-site the working positions to reduce glare from windows;
- redecorate to avoid heavy contrasts, especially between windows and dark walls, and ceilings and light fittings;
- fit shades or blinds to reduce glare from windows;
- alter the position of fluorescent light strips so that they are viewed end on;
- make sure that desk lamps are properly positioned and screened; and

- be careful that the light brightness is not unacceptably reduced in attempts to tackle glare - simply cutting light levels is not enough.

Design

It is important to get lighting arrangements right at the design stage for example when new work layouts are being planned. Some key principles are:

- **use natural light** as much as possible - most people prefer it**,** but windows need to be well sited and kept clean; light levels fall away rapidly as you move further from a window, so extra lighting will be needed for some parts of rooms, even in daylight;
- **position fittings carefully** to make the best use of light while avoiding glare;
- **consider room decor -** light ceilings and walls make the best use of light - avoid heavy contrasts;
- **provide local lighting** (such as desk lights); and
- **emergency lighting** may be required by law for the workplace - it may be specified in the fire certificate; emergency lighting is powered from batteries or generators; batteries need to be placed in a well-ventilated room and the system must be regularly checked and tested; illuminated emergency exit signs should also be checked.

Maintenance

Even well designed lighting systems will not perform properly unless well maintained. Dirty fittings can produce a light loss of 20%. Old fluorescent tubes can lose up to half their brightness before they fail. Bulbs lose 10% brightness before failure. Old light units are less economical because they use the same current to produce less light. It is better to replace lamps in a group in all but small lighting systems. This can be more economic and less disruptive than replacing individual units as and when they fail. A regular cleaning programme for fittings is also sensible.

CLEANLINESS

Regulation 9 of the Workplace Regs states that:

(a) every workplace, furniture, furnishings and fittings must be kept sufficiently clean;
(b) floors, walls and ceilings must have easily cleaned surfaces; and
(c) waste materials must not be left around, except in suitable containers.

The ACoP warns that cleaning should be carried out by an effective and suitable method and without exposing anyone to a health and safety risk. This includes risks to people doing the cleaning.

SPACE

The provision of an adequate amount of space within which to work is essential. Overcrowding can increase accident risks and can be a major source of stress. Safety Reps should be consulted “in good time” about changes at work and this should include the design and layout of workplaces. It is especially important that Safety Reps are involved in planning of new work layouts since many problems connected with working space can be identified at the planning stage.

Regulation 10 of the Workplace Regs states that every workroom shall have sufficient floor area, height and unoccupied space for purposes of health, safety and welfare. The ACoP says that as a minimum, 11 cu metres should be allowed per person working in a room. This assumes that the room is up to 3 metres high. The number of people who may work in any room at the same time will depend on the size of the room, the space taken up by furniture, fittings and equipment and the layout of the room. Therefore, the minimum allowance of 11 cu metres will not comply with these Regs if the room is crowded with equipment or furniture. Unfortunately, the Workplace Regs do not apply to non-employees and, therefore, can only be considered as guidance when considering the space in classrooms.

The General Schools (Scotland) Regulations 1975 (Regulation 8) outlines the recommended method by which the maximum number of pupils for whom every room is suitable should be calculated. The table below is from guidance produced by the Association of Directors of Education in Scotland in 1975.

	Teaching Rooms/Areas	**Space/Pupil**
		Area in m^2
1	Primary	1.75
2	Secondary	1.5
3	Remedial/Tutorial	2.0
4	Lecture/Assembly Hall	0.5
5	Resources/Library	5.0
6	Games Hall	7.0
7	Gym	5.5
8	Pool (Water Space)	4.0
9	Dance/Drama	3.0
	Secondary	
10	Technical Drawing	2.75
11	Music	2.4
12	Art, Craft & Business Studies (Practical)	3.0
13	Home Economics	3.8
14	Woodwork and Metalwork	4.25
15	Science	3.25

ACTION CHECKLIST: SPACE

1. Carry out an inspection to see if there is adequate space provided in all work areas.

2. Does the amount of equipment and furniture in the workplace make the area unsafe?

3. How can the layout be improved?

WORKSTATIONS AND SEATING

Prolonged standing at work is one the most common sources of discomfort and fatigue. The muscles of the thighs and calves are contracted in order to maintain the upright position, and energy is consumed in holding the body upright. Prolonged standing is therefore an important contributory cause of accidents and health hazards such as varicose veins, back strain and upper limb disorders.

Seats for work should be designed and adjusted so that work can be carried out in comfort and safety and allow for a voluntary change of posture. The chair and the working level are one unit in the working position the arms should be unhampered, the forearm approximately at right angles to the upper arm and the elbows level with or slightly above the work surface.

The chair should be stable, it should have a comfortable seat of the correct size for the worker and be at the right height for the work, ie allowing the feet to be placed with sole and heel in a comfortable position on the floor or footrest with the angle at the knee approximately at a right angle. There should be support for the buttocks without pressure on the under part of the thigh or back of the calf, and a backrest to support the small of the back.

There should be freedom of movement without loss of support and no obstructions below the bench or table which might cause pressure of the thighs or knees. Sharp edges, corners or protrusions liable to cause injury or damage to clothing must be avoided.

Regulation 11 of the Workplace Regs says that:

(a) every workstation must be suitable for the worker using it and the work being carried out;
(b) outdoor workstations should provide protection from bad weather, allow the user to leave quickly in an emergency, ensure that the user is not likely to slip or fall; and
(c) suitable seating shall be provided where the work can be done sitting down, with a footrest where necessary.

The Display Screen Equipment Regulations 1992 also include specific requirements for workstations and seating (See Chapter 22).

SLIPS, TRIPS AND FALLS

HSE statistics suggest that slips and trips are a major cause of accidents to education employees.

Regulation 12 of the Workplace Regs states that every workplace floor:

(a) must be suitably constructed, without uneven or slippery surfaces;
(b) be free, so far as is reasonably practicable, from obstructions slip, trip or fall hazards; and
(c) should have effective drainage in wet areas.

In addition stairs must be provided with handrails.

PRACTICAL MEASURES FOR SLIPS RISK CONTROL IN EDUCATIONAL ESTABLISHMENT

HSE Education Information Sheet No 2: 'Preventing slip and trip incidents in the educations sector', provides guidance on the practical measures which can help to reduce the risks of accidents due to slips, trips or falls. This guidance is summarised below:

External steps, paths and parking areas:

Suitable lighting – replace, repair or clean lights before levels become too low to be safe
Ensure steps and paths are suitable for the volume of pedestrian traffic
Ensure paving slabs are secure and tarmac paths in good condition to give a flat, even surface
Maintain parking area so that it is free of potholes
Mark the nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions
Provide handrails where appropriate and maintain in good condition
Discourage short cuts across grassed/muddy areas
Clean leaves, mud etc from surfaces
Remove algal growth
Put in place effective procedures to deal with snow or ice

Playgrounds and all-weather ports surfaces:

Ensure surface is flat and well maintained to avoid surface water
Remove accumulations of mud/water
Remove algal growth
Ensure users wear the appropriate footwear for the surface
Ensure adequate supervision at all times

Building entrances/exits

Provide suitable non-slip, water absorbing mats at entrances
Maintain mats in good condition and change when saturated
Ensure that temporary matting does not pose a trip risk

Display signs warning of hidden steps/changes of level
Display signs warning of risk of slipping when appropriate
Site door catches and door stops safely

Sports halls

Avoid over polishing of floor surface
Ensure suitable footwear is worn
Maintain floor mats in good condition and ensure they remain flat
Keep smooth floors clean and completely free of wet or dusty contamination

Changing rooms/swimming pools

Avoid contamination of the floor surface with mud/water from pupils entering – provide shoe cleaning brushes/scrapers
Provide non-slip tiling on floor surfaces. Ensure specialist anti-slip tiles/surfaces are sourced and specified correctly
Provide drainage mats or grids in shower areas
Provide handholds for people with disabilities

Internal stairs and corridors

Ensure a staggered release of students onto heavily used traffic routes
Put in place measures for traffic streaming and flow management up/down stairs
Put in place measures for traffic streaming and flow management along corridors
Mark nosing of steps using anti-slip coating, as smooth, gloss paint will make the surface slippery under wet conditions. Provide handrails
Lighting – replace, repair or clean lights before levels become too low to be safe
Apply appropriate anti-slip coatings to areas of smooth flooring which may become wet

Classroom areas (including laboratories and practical areas)

Avoid trailing cables from equipment and tools
Provide storage racks for pupils' bags
Provide coat hooks/racks for drying wet clothing – consider siting such areas on specialist anti-slip flooring as even drips of rain water on smooth surfaces can be enough to result in slips
Provide specialist anti-slip flooring in potentially wet areas
Do not store materials or equipment below tables/benches
Avoid overcrowding of rooms
Control the entry and exit of people from classes
Display art work, practical work etc safely
Clear away toys in early-years classes

Preparation rooms, technician areas and storage rooms

Provide suitable storage for goods and equipment
Keep containers of bulk liquids in bunded areas
Clear area around machines, kilns and other equipment
Use slip-resistant flooring around machines
Remove floor contamination, eg sawdust, clay, oils

Kitchens

Provide suitable equipment to avoid spillages (from cooking, washing etc)
Provide edged work surfaces to contain spillages
Ensure good ventilation to avoid smoke/steam and condensation
Ensure staff wear suitable footwear
Clean spillages and pick up food contamination immediately
Dry floors effectively after cleaning
Ensure good housekeeping around bins
Provide suitable floor surface
Clean floors with appropriate products for surface after work has finished
Display suitable warning signs *re* wet floors/stairs while cleaning is in progress
Remove warning signs when cleaning/drying is complete

Canteen areas

Ensure staff wear suitable footwear
Clean spillages immediately
Use safe cleaning methods
Provide suitable floor surface
Clean floors when pupils/students have left
Display suitable warning signs *re* wet floors/stairs while cleaning is in progress
Remove warning signs when cleaning/drying is complete

Offices

Avoid trailing cables/Use cable covers
Provide adequate storage
Avoid storage of materials on floors
Ensure good housekeeping round photocopiers, printers etc
Replace worn or damaged carpets/tiles
Provide secure storage for bags etc

Events

Ensure temporary cabling is routed safely and protected from damage
Provide sufficient lighting during set-up/dismantling
Use of temporary matting/straw coverings on grassed areas

Educational Visits

Assess location and anticipated weather
Modify visit depending on local conditions when on site
Wear suitable footwear
Ensure effective management of the visit

Premises managers will need to consider the individual needs of the user population. Some pupils, students and visitors may have disabilities. Arrangements will need to be reviewed for open evenings, events, functions etc when further precautions may be required for people with disabilities and for anyone unfamiliar with the site.

WORKING AT HEIGHT

The Work at Height Regulations 2005 cover all work at height where there is a risk of a fall liable to cause personal injury (these Regulations replaced the requirements under Regulation 10 and 11 of the Workplace Regs). Employers are required to do all that is reasonably practicable to prevent anyone falling. Working at height should be avoided where possible. Where avoidance is not possible work equipment or other measures should be taken to prevent falls. Training should be provided for employees who are required to work at height. The use of step-ladders or ladders is covered by these regulations.

Working at height increases the risk serious injury and should be avoided. Teachers and lecturers should not undertake work at height unless they have been provided with appropriate equipment (eg, step ladders or a working platform) and have received training in the use of the equipment and on safety when working at height.

TRAFFIC ROUTES

Regulation 17 of the Workplace Regs states that workplaces must be organised to allow the safe circulation of pedestrians and vehicles. Traffic routes must be suitable for their intended use, sufficient in number, be suitably positioned and indicated, and of sufficient size.

Suitable measures must be taken to ensure that use of traffic routes does not give rise to risks to persons working nearby; vehicle routes are separated from pedestrian routes; doorways or gates leading onto vehicle routes are sufficiently separated from the route; and vehicles and pedestrians using the same traffic route are sufficiently separated. The ACoP states the need to consider the requirements of disabled people.

HSE recommends a number of factors to consider for improvement of transport safety in the workplace:

Road Layout: design and layout of road systems should be clear, well-marked and wide enough to take the vehicles which will come on site. Account should be taken of any vehicles from outside the worksite, which may be wider or higher than those normally used on sites.

The need to reverse vehicles, sharp bends and blind corners should be eliminated, if possible. Where they exist, clear signs and mirrors should help in reducing the danger. The use of speed inhibitors can assist in reducing the speed of vehicles on site. Traffic flow signs and the markings of doorways, receptions areas etc, should be clear and easily read.

Pedestrians: traffic should be kept separate and specific routes should be provided for pedestrians from which traffic is prohibited. Where traffic may need to cross a designated walkway, it must be clearly marked. Doorways should not open immediately onto a roadway. Where it is known that many people may exit from a doorway onto the path beside a roadway, barriers should be erected to ensure that people are not forced directly onto the roadway.

Parking areas: should be suitable and sufficient for all vehicles and cleaned and maintained. Roads should be constructed of tarmac, concrete or other suitable material and should have even surfaces, be properly drained and avoid excessive gradients.

Lighting: should be adequate for all roads, particularly at road junctions and pedestrian areas.

Vehicles and Drivers: work vehicles should be suitable for their purpose and properly maintained in accordance with manufacturers recommendations. Drivers should be trained and only operate vehicles they are licensed or trained for. Fork lift trucks are a particular source of danger and operators must be trained.

SANITARY CONVENIENCES, WASHING FACILITIES AND DRINKING WATER

Toilet facilities and washing facilities which are clean and well maintained are an essential feature of a civilised workplace. Safety Reps should use the legal standards as a **minimum** when seeking improvements in such facilities.

Regulation 20 of the Workplace Regs states that readily accessible, suitable and sufficient sanitary conveniences must be provided, adequately ventilated and lit, kept clean and maintained in an orderly condition. Separate conveniences for men and women must be provided except where the convenience is in a separate room, the door of which can be secured from the inside.

The ACoP defines the following **minimum** provisions:

- for 1 to 5 employees, one water closet;
- for 6 to 25 employees, two water closets; and
- an extra water closet for every extra 25 employees.

Where the sanitary accommodation is used only by men a less good **minimum** standard may be applied:

- for one to 15, one water closet and one urinal;
- for 16 to 30, two water closets and one urinal;

- for 31 to 45, two water closets and two urinals;
- for 46 to 60, three water closets and two urinals;
- for 61 to 75, three water closets and three urinals;
- for 75 to 90, four water closets and three urinals; and
- for 91 to 100, four water closets and four urinals.

The ACoP recommends that suitable sanitary accommodation should be connected to a suitable drainage system; have means for flushing water; contain toilet paper in a holder or dispenser; have a facility for hanging coats; and where used by women, contain means for disposal of sanitary dressings. Access for disabled people should be taken into account.

Where facilities are being used by members of the public, for example visitors, the number of conveniences should be increased to ensure that workers can use the facilities without delay.

Washing facilities will be considered “suitable” if they are in the immediate vicinity of sanitary conveniences; in the vicinity of changing rooms; provided with a clean supply of hot and cold (or warm) water (where practicable the water supply should be running), soap or other means of cleaning, towels or other means of drying; sufficiently ventilated and lit and kept clean and orderly. Separate facilities must be provided for male and female workers, except where the facilities are provided in a room, intended for use by one person at a time and which can be secured from the inside. This last provision does not apply to washing facilities intended for washing the hands, forearms and face only.

The ACoP recommends the following **minimum** washing provisions:

- for 1 to 5 employees, one washing unit;
- for every additional 25 employees, an additional washing unit; and
- for 76 to 100 employees five washing units.

Sanitary accommodation and washing facilities should ensure the privacy of the user.

Regulation 22 states that an adequate supply of **drinking water** must be provided. Such drinking water must be wholesome, situated at suitable and readily accessible places and conspicuously marked, where necessary for reasons of health and safety. Suitable and sufficient cups or other drinking vessels must also be provided, unless the water is supplied by an easily drinkable jet.

ACCOMMODATION AND FACILITIES FOR CLOTHING

Regulation 23 requires that suitable and sufficient **accommodation** must be provided for personal clothing not worn at work and clothing worn at work but not taken home. Such changing accommodation must be suitably secure, provide separate areas for work clothing and other clothing where necessary to avoid health risks or damage and be in a suitable location. It should also, so far as is reasonably practicable, include drying facilities. The Personal Protective Equipment Regulations

1992 also require accommodation for clothing and equipment provided under its own requirements.

- Regulation 24 states that changing facilities should be required where a person is required to where special work clothing and cannot change is another room due to reasons of health or propriety. The ACoP recommends that changing facilities should be readily accessible to workrooms (and eating facilities if provided) and should contain adequate seating arrangements. The facilities should be large enough to enable the maximum number of workers to use them comfortably and quickly at any time.

FACILITIES FOR REST AND TO EAT MEALS

Regulation 25 states that readily accessible, suitable and sufficient rest facilities must be provided. Where food eaten in the workplace is liable to become contaminated, suitable facilities for eating meals must be included in the rest facilities. Rest rooms and areas must include suitable arrangements for protecting non-smokers from discomfort from tobacco smoke. Suitable rest facilities must also be provided for pregnant women and nursing mothers. Appropriate access arrangements must be made for disabled employees.

The ACoP recommends that rest facilities should include seats and tables for the number of workers likely to use them at any one time. Work seats in offices or other clean environments may be acceptable as rest facilities provided workers are not subjected to excessive disturbance during rest periods. Eating facilities should include a facility for preparing or obtaining a hot drink, and where hot food cannot be readily obtained, means should be provided to enable workers to heat their own food. Canteens may be used as rest facilities if there is no obligation to buy food.

8. *FIRST AID*

Besides being required to take steps to prevent injuries and ill health at work, employers are also obliged by law to provide first aid facilities.

When someone falls ill or is injured at work, a trained first aider should be there to attend to them. Even minor injuries such as cuts and bruises may otherwise be ignored or become infected and complications may develop. Sometimes proper first aid provision can make the difference between life and death by stopping minor injuries or sudden-onset illnesses becoming major problems. The first few minutes after an event are vital, even when an ambulance or a doctor or a nurse has to be called.

First aid arrangements at work should be reviewed regularly to identify problems and the scope for improvements. Typical problems with first aid cover include:

- too few or no first aiders in more dangerous areas;
- first aid boxes which are too few or empty or poorly maintained;
- no first aid facilities for employees working away from the workplace; or for shift workers;
- poorly equipped first aid rooms;
- employees not knowing who is the first aider or where the first aid box is kept;
- reduced first aid cover when work systems are reorganised; and
- ignorance of first aid procedures.

THE LAW

Since 1982 the minimum legal standard for nearly all workplaces has been the Health and Safety (First Aid) Regulations 1981. An up-dated ACoP and Guidance was produced in 1997.

The Regulations put five clear duties on employers to:

(a)	*provide adequate and appropriate first-aid **equipment** and facilities;*	*Reg 3(1)*
(b)	*provide an adequate number of **trained and qualified first-aiders;***	*Reg 3(2)*
(c)	*provide an **'appointed person'** if the first-aider is absent;*	*Reg 3(3)*
(d)	*in certain workplaces (defined by level of risk, number of employees and location), to provide an **'appointed person**' instead of a first aider; and*	*Reg 3(4)*
(e)	*to provide **information** to all workers about the provision of first-aid, location of equipment, facilities and personnel.*	*Reg 4*

WHAT IS REQUIRED?

When providing first aid under the Health and Safety (First Aid) Regulations 1981, the employer has to take into account the following:

- workplace hazards and risks;
- size of organisation;

- accident history of organisation
- nature and distribution of workforce;
- extent of shift work;
- employees working or shared or multi-occupied sites;
- annual leave and other absences of first aid personnel;
- location of the establishment; workers in remote areas will need more first-aiders and equipment than those working near a hospital;
- first aid needs of workers while working away from the main site; and
- trainees and the public.

The employer must regularly review any assessment of first aid needs.

Safety Reps have a right to be consulted (HASAWA 2(6)) on decisions about the level of hazard in the workplace. They should also be consulted about the implementation of the 1997 ACoP and Guidance.

FIRST-AIDERS AND APPOINTED PERSONS

First-aiders are people who have been trained and been given certificates to show that they are capable of administering first-aid. According to the ACoP the types of first-aider who are “suitable” are:

- first-aiders who have been on an HSE approved training course and hold a current certificate; and
- any other person who has undergone training and obtained qualifications approved by the HSE, such as medical practitioners and practicing nurses.

The ACoP also gives guidance on the ratio of first-aiders to employees. This should be decided based on assessments of risk and number of workers. For low risk premises (eg shops, offices, libraries etc), if there are 50 employees there should be at least one first aider. For medium risk (eg, light engineering, assembly work, food processing etc) if there are 20 employees there should be at least one first aider. For high risk premises (work with dangerous machinery, construction, etc) if there are 5 employees there should be at least 1 first aider. Primary schools would come in the low risk category and most secondary schools in the medium risk. Colleges and universities would consider the number of first aiders required in specific departments or schools. There is no duty to provide first aid for non-employees, ie pupils, students or the public.

If there is no first aider for a particular workplace there must be an appointed person. An appointed person has two main tasks:

- to take charge of the situation (call an ambulance for instance) in the absence of a first-aider; and
- to keep first-aid facilities and equipment in good order in the absence of a first-aider.

TRAINING

The training of first-aiders can only be done by organisations or employers approved by the HSE a free list is available. On successfully completing such a course a

certificate is awarded and is valid for three years. A refresher course and re-examination are required before a new first-aid certificate can be issued.

It is advised that instruction in emergency first-aid (resuscitation, control of bleeding, treatment of unconsciousness) should be given to all appointed persons and to all workers who work in small groups away from the employer's main workplace.

The possible legal liability of first-aiders may put people off volunteering for the job. Some employers have been persuaded to put in writing that they will take responsibility for the treatment given by first-aiders acting on their behalf.

There is no legal or contractual requirement for a teacher or lecturer to become a first-aider.

FIRST AID BOXES

The Guidance gives details of what should be in, or near, first aid boxes, and the quantities required; and the contents of traveling first-aid kit. Whenever items are used, they must be replaced. The contents of first aid boxes and kits need to be regularly checked. Every workplace must have at least one first-aid box, and the box - and all its contents - must be accessible at all times that workers are present (see next page for guidance on contents).

First aid boxes and kits should contain only the items that a first-aider has been trained to use. **They should not contain medication of any kind.** They should always be adequately stocked. First-aid kits may be provided for particular situations, and should be stocked accordingly. An antidote or special equipment needed to deal with a specific hazard may be kept near the hazard area or in the first-aid box.

Other first-aid equipment which could be necessary will include stretchers, blankets, and protective clothing if needed when first-aiders themselves might be put at risk going to the aid of an injured person. Any extra first-aid equipment must be stored near the first-aid box, protected from dust and damp, and regularly checked.

According to ACoP 3(1) a first -aid room is only necessary in an establishment if there is a special or unusual hazard; if workers are dispersed over a wide area; or if there is difficulty in getting the injured to hospital.

INFORMATION

People need to be able to find the nearest first-aider, and the nearest facilities in an emergency. The Regulations include the following requirements:

- employers have to tell workers of the first-aid arrangements, the location of the equipment, facilities, and personnel - Reg 4;

- new workers should be given this information as part of their induction training. Workers who move to other departments or areas need to be given information about the procedures in the area they move to - ACoP 4(1);

- there should be **at least** one notice in each workplace, giving locations of facilities and equipment, and names and locations of first aiders - ACoP 4(2);

- notices should be in English and other languages commonly used in the workplace – ACoP 4 (3)

- the location of first-aid facilities should be clearly marked. Signs should comply with the Safety Signs Regulations.

Contents of first-aid boxes

All establishments will need at least one first-aid box which should contain a sufficient quantity of suitable first-aid materials and nothing else. In most cases these will be:

Item	***First-aid boxes***	***Travelling first-aid kits***
Guidance leaflet *First aid at Work*	1	1
Pair of disposable gloves	1	1
Individually wrapped sterile adhesive dressings (assorted sizes)	20	6
Sterile eye pads, with attachment	2	
Individually wrapped triangular bandages	6	2
Safety pins	6	2
Medium sized individually wrapped sterile unmedicated wound dressings (approx 10em x 8cm)	6	
Large sterile individually wrapped unmedicated wound dressings (approx 28cm x 17.5cm)	2	1
Extra large sterile individually wrapped unmedicated wound dressings (approx 13cm x 9cm)	3	
Individually wrapped moist cleaning wipes (suggested minimum number)		6

9. *STRESS*

Stress at work can be damaging and can adversely affect both mental and physical health. Stress is a very commonly used term, and something to which we are all subjected in varying degrees, but it can be difficult to define. It is often used to describe distress, fatigue and a feeling of not being able to cope. Others see it as a driving force which helps them to survive. People respond to the same situation in very different ways. Some will manage a stressful situation for a period of time and then find it intolerable.

Stress will result if the demands made on individuals do not match the resources available (in the person or provided by the organisation) or meet the individual's needs and motivation.

CAUSES OF STRESS

Stress at work may arise from a variety of sources. Often there will be more than one factor responsible for an individual's stress reaction and personal factors and situations cannot be excluded from the stress equation. Organisational change or restructuring, work overload, relationship difficulties, being bullied or harassed at work are all potential sources of stress which could contribute or cause serious psychological damage.

EFFECTS OF STRESS

The body itself has a built-in mechanism which is designed to combat attack, based on the well-established response of 'fight or flight'. While it may have been very useful to our ancestors, these responses can be unacceptable and ineffective in coping with stress at work.

The physiological response is useful if it is called into play rarely and only for a short time. The increasing heart rate and muscle tone, the effect on blood sugar levels and the ejection of fats into the blood, do prepare the body against assault or for escape. But if these responses become a regular or chronic reaction to the demands of working life then they will be harmful.

The hormones released can themselves cause damage. The links between adrenaline and coronary heart disease are known. Also, while in the short term adrenaline will help the body to react quickly, too much adrenaline will have an effect on the brain and produce the sensation of tiredness.

The symptoms of chronic (long-term) stress are wide ranging. They can include indecision, loss of appetite, reduced weight, headache, backache, skin rashes and difficulty in sleeping and may lead to heart diseases, and ulcers.

Diseases of the blood circulation system are probably the best known stress-related illnesses, including:

- hypertension;
- coronary heart disease;

- angina; and
- coronary thrombosis (heart attack).

Several factors can increase the effects of stress, such as smoking, alcohol and lack of exercise.

Diseases of the digestive system are also clearly linked to stress. The increase in stomach acids and the decrease in stomach activity which accompanies the emergency response can lead to ulcers and colitis (inflammation of the bowels). Again these stress factors can be made worse by an inadequate diet and lack of proper opportunities to recover from the stress.

Other illnesses associated with stress include:

- bronchial asthma;
- nervous rashes;
- some cancers; and
- the triggering of diabetes.

Stress and mental health

Mental strain caused by stress at work is one of the most common but least understood aspects of the problem. Psychological reactions include:

- fatigue;
- anxiety;
- depression;
- hostility and aggression;
- psychosomatic complaints; and
- neuroses.

Illnesses associated with mental strain are not usually classified as occupational diseases, and nor are the symptoms identified. Few records are kept, even though their origins may be clear to the millions of workers who are suffering every day.

Mental strain or mental ill health caused by stress in work is very rarely tackled. Society's attitudes to mental ill-health are very different from those to physical ill health. This can add to the pressure of the stressed individuals and may cause them to try and hide the effects until they become so great that the symptoms are unavoidable.

Just as the ways which the body reacts to stress can be harmful if stress is prolonged, so too are some of the ways which people use to try and reduce stress symptoms. As levels of stress increase so does consumption of alcohol, cigarettes, and tranquillisers.

TACKLING OCCUPATIONAL STRESS

Stress is an occupational hazard that employers should, as far as reasonably practicable, protect their employees from. There should be a clear policy on stress

and it should be considered in the employer's risk assessments as required by the Management of Health and Safety at Work Regulations. The Stress Management Standards produced by the HSE provide a tool for assessing the extent of the stress problem in an organisation and indicate the where preventative measures are required. The Health and Safety Executive will also be able to use the Standards to assess how well employers are managing stress. The Standards classify the causes of stress under six headings; Demands (e.g. workload and the working environment), Control (an individual's control over his or her work), Support (provided by the organisation/ management/colleagues), Relationships (causes of stress include bullying or harassment), Role (problems of role ambiguity or conflict can cause stress) and Change (how organisational change is managed can impact on stress levels).

For information on the Standards visit: www.hse.gov.uk/stress/standards/index.htm

Further information on stress can be found at: www.hse.gov.uk/stress.

Practical advice on how to cope with work pressures and stress can be found on the Teacher Support website: **www.teachersupport.net**

ACTION FOR SAFETY REPS

If a member is off work due to a stress related illness it is important that she or he is advised to inform the employer of the exact nature of the illness and its causes. On receiving such information the Head Teacher or Line Manager should arrange for a referral to the occupational health service or welfare service. Cases of stress related ill health absences may be the result of bullying or harassment and in these cases the assistance of the general EIS Rep and the Local Association Secretary or Branch Secretary may be required.

10. *VIOLENCE*

The risk of a violent attack at work is a serious occupational hazard. The EIS does not accept that a risk of a violent attack at work is something which is part of the job.

DEFINING VIOLENCE AT WORK

Defining what is meant by a violent incident is difficult. Clearly it must include incidents which cause death or physical injury but threats, especially with a weapon or an implement, are also important even if no injury occurs. Constant verbal abuse can cause health damage by being a source of stress. Sometimes violence is not limited to the workplace but follows workers to their homes or takes the form of attacks on their property such as the car they use to undertake their job.

The HSE defines violent incidents as those:

- requiring medical assistance (major injury);
- requiring only first aid (minor injury);
- involving a threat with a weapon/object but causing no physical injury; or
- involving verbal abuse.

Sexual and racial harassment should also often be dealt with as violence at work.

People are often reluctant to report incidents for a number of reasons. Some fear it could be seen as their own failure - their mishandling of a situation and their professional incompetence. Some do not want the attention that a report would bring and, given the absence of counselling and support for victims, see no point in reporting it. Members must be encouraged to report all violent incidents otherwise the scale of the problem remains hidden.

THE LAW

There is no specific mention of violence in HASAWA, but all the general duties placed on employers by the Act still apply to the control of this risk. Under the Act employers must provide:

- safe systems of work (ie safe methods of working);
- safe workplaces;
- a safe working environment; and
- information, instruction and training for staff.

And the Management Regs state that employers must provide a ‘suitable and sufficient’ assessment of any risks to the health and safety of their employees.

RIDDOR 1995 requires employers to report to the HSE physical injury due to an assault arising out of or in connection with work. The new requirement only applies acts of violence which result in physical injury. Further details on reporting and recording acts of violence which result in physical injury can be found on page 201 below.

RISK ASSESSMENT

Risk assessments should cover violence at work as some employers do not recognise that personal attacks on staff are risks and fail to include this in the process of risk assessment. The HSE has issued a number of enforcement notices on public sector employers requiring them to carry out risk assessments and to reduce the risk of violence.

Some violent incidents cannot be predicted but many are foreseeable and therefore employers have a responsibility to identify these and seek to prevent them. Where a real risk of violence exists, employers must, to meet their legal responsibilities:

- identify such hazards to the safety of workers arising from the jobs which they are asked to do;
- plan measures to remove hazards and reduce risks; and
- train and inform all workers affected.

Where violence is a problem, employers should make a commitment to prevent foreseeable incidents of violence and this commitment, which must come from the highest level in management, must be translated into practical arrangements. All workers at risk must have confidence that their employer not only deplores acts of violence towards them but has developed a strategy with which to prevent, control or minimise the risks involved.

A PREVENTIVE STRATEGY

The effectiveness of any measure can only be assessed by its relevance to any one situation where violence is a possible outcome. The question of violence must be taken into account when decisions are being made about such issues as:

- designing and altering buildings;
- setting staffing levels;
- job design and re-design;
- working practices;
- communication channels and procedures;
- recording of incidents at work;
- assessing training needs; and
- establishing an occupational health service.

Employers should develop practical policies which include:

- investigation of risk areas and groups;
- proper reporting procedures;
- the development of safe systems of work;
- the creation of safer workplaces;
- information and training for all workers at risk;
- examination of the relevance of training and any training gaps;
- counselling and support for the victim and their colleagues; and
- effective monitoring.

Some employers have produced policies on the prevention of violence but many of these are merely procedures informing their workers what to do after violence has happened. Others have produced policies which include detailed arrangements on how they are going to protect their staff from the risk of foreseeable violence.

COMPENSATION FOR VICTIMS

Compensation can be obtained through the Criminal Injuries Compensation Authority. No legal advice or representation is necessary but if legal or other advice is sought the CICA will not pay the costs of the services. However, the EIS provides full legal support for members throughout the CICA application process.

For an application to be considered, a person must have been:

- a victim of a crime of violence or injured in some other way covered by the Scheme (includes assaults and sexual offences, attacks by dogs, arson attacks, attacks by anyone who was not responsible under criminal law eg. young person or insane);
- physically or mentally injured as a result;
- in England, Scotland or Wales at the time when the injury was caused; and
- injured seriously enough to qualify for at least the minimum award available under the Tariff.

An incident should be reported to the police as soon as possible after the event. It is important that a teacher or lecturer who has been the victim of an assault reports this to the police if this has not been done by the employer. To gain compensation from CICA the assault must be reported to the police.

ACTION FOR SAFETY REPS

Safety Reps should:

(1) Encourage all members to use the employer's violent incident report forms following every violent incident.

(2) Where keep a record of incidents as this can provide valuable evidence it there are on-going problems which are not addressed.

(3) Following a serious incident or in response to a series of incidents request that the employer carries out a risk assessment.

(4) If a member is injured ensure that the employer's reporting procedures have been followed and that the injury is recorded in the Accident Book.

(5) Ensure that the Local Association or Branch is made award of all incidents resulting in injury.

(6) Where a member has been injured advice should be given to consider making a claim for personal injury. Claim forms, which are used to start this process, can be obtained from Local Associations, Area Offices or from the Employment Relations Department at EIS Headquarters.

(7) Remind the member that the EIS provide a Victim Support telephone helpline for members who are the victims of violence:

Tel: 0843 2084571

11. *ASBESTOS*

Asbestos is a soft mineral rock which has been used in pipe and boiler insulation, sprayed coatings on structural steelwork, brake linings, ceiling tiles and wall panels, ventilation systems, fire doors and hundreds of other products. It is made of millions of light, indestructible fibres that make it valuable but hazardous. There are three main types of asbestos that you may find at work:

- crocidolite - 'blue' asbestos;
- amosite - 'brown' asbestos; and
- chrysotile - 'white' asbestos.

Most asbestos went into buildings or ships as pipe and boiler lagging (blue, brown and white), fire insulation panels (usually brown), and asbestos cement sheets (white).

For Schools and Colleges the main concern is with buildings built before the 1980s which are likely to contain asbestos containing materials (ACMs) used in the fabric of the building and in insulating products.

WHY IS ASBESTOS SO DANGEROUS

The tiny, often invisible fibres that make asbestos so useful are harmful to humans when they are breathed in. The main diseases caused by asbestos dust are:

- **lung damage -** lung scarred and thickened, breathing difficult, strain on the heart;
- **asbestosis -** a type of 'pneumoconiosis' caused by accumulation of dust - lungs scarred and shrunken, increasing breathlessness and pain in chest. The disease can get worse even if the sufferers are no longer exposed to asbestos dust;
- **heart failure -** workers die of heart failure or of infections that easily take hold of diseased lungs;
- **mesothelioma -** a cancer of the lining of the stomach or lung cavity. It cannot be cured and leads to early death;
- **lung cancer -** the disease which kills most asbestos workers; and
- **other cancers -** there is evidence that asbestos may also cause cancer of the throat.

IS THERE A SAFE LEVEL OF ASBESTOS DUST?

Experts have agreed that there is no safe level of asbestos. HSE Guidance makes the position clear:

"The control limits do not represent safe levels which once attained make further improvements in dust control unnecessary. They represent the upper levels of permitted exposure, for each form of asbestos above which the risk to health is unacceptable."

Asbestos cancers have been caused by very small amounts of dust - for example, in people who cut up asbestos panels for only a few days, or in the relatives of

asbestos workers who were exposed to dust from overalls. However, like smoking, asbestos dust only affects some of those exposed to it. The more dust you breathe in the greater the risk to your health.

ARE SOME ASBESTOS PRODUCTS MORE DANGEROUS THAN OTHERS?

Blue, brown and white asbestos can cause asbestosis, lung cancer and mesothelioma, but blue and brown seem to cause more mesothelioma than white asbestos. This has led to the dangerous myth that white asbestos is 'safe'.

All types of asbestos dust are dangerous.

Those that can give off dust easily are the most dangerous, eg insulation lagging on pipes and boilers.

Other products like asbestos cement are much less dusty and dangerous unless they are weathered, broken up, or cut up with tools.

THE LAW

The Control of Asbestos at Work Regulations 2012 provides a comprehensive framework for the control of asbestos in the workplace. It requires the prevention or reduction of exposure to asbestos, assessment of the degree of hazards involved in the work, notification to the enforcing authority of work which is liable to be hazardous, the provision of information and training to employees, medical surveillance and the provision of effective control measures.

The Regulations introduced a new duty to manage asbestos in non-domestic premises. Asbestos containing materials should be located, identified and an assessment undertaken of the risks of anyone being exposed to fibres from these materials. Information on the location and condition of these materials must be provided to anyone who is liable to work on or disturb them. Safety Reps should also be provided with this information.

The TUC/HSE Guidance on Asbestos for Safety Representatives is provided in Chapter 27.

12. *CHEMICALS AND TOXIC SUBSTANCES*

Safety Reps need to be aware of the potential damage to health arising from the use of chemicals and other hazardous substances. Unlike physical hazards, where the hazard is visible and the effects immediate, the harmful effects of toxic substances are not always obvious.

RISKS DUE TO CHEMICALS AND TOXIC SUBSTANCES

Although our body's defence mechanisms provide protection against attack from many chemicals, if these defences are overloaded then impairment of health may follow, ranging for example, from a slight skin rash to a malignant tumour with fatal consequences.

The hazard of a chemical is sometimes first recognised only when it is too late and signs of ill health begin to appear. All chemicals should therefore be treated with caution. Particular care is needed if the chemical has been proved experimentally to be harmful to animals or when a chemical with a similar structure has been known to cause harm in man. Risk depends upon the *toxicity* and *dose* of a chemical;

(a) *toxicity:* the toxicity of a chemical is its potential to cause harm - this varies with each chemical, its route of entry into the body and the manner, site and speed of body response. For example, caustic soda may cause a chemical burn, silica fibrosis of the lung; and
(b) *dose:* this is the amount of the chemical that is absorbed into the body, and its effect is dependent on the concentration of the substance in different organs and tissues and time over which it acts.

Some chemicals can accumulate in the body and, in these cases, repetitive low doses may cause harm.

HOW CHEMICALS ENTER THE BODY

The ease with which a chemical enters the body depends on both its physical and chemical properties. Physical properties include the form of the chemical when it reaches the body: gas, vapour, aerosol, fume, liquid, dust or fibre. For an aerosol, dust or fibre, particle size is important as this affects how far it can travel into the lungs. Chemical properties include solubility in body fluids (such as water and natural oils) and reactivity with the body's own chemicals. The most common routes are:

(a) *inhalation:* breathing in chemicals is the most common route. Large particles are filtered off in the nose; smaller ones, or those breathed in through the mouth, settle on the walls of the upper respiratory tract or throat and are coughed up and either spat out or swallowed. The smallest particles of dust and fibres can be inhaled down into the lungs where they can cause local damage or can be absorbed into the blood stream. Aerosols, fumes, vapours and gases can cause harm anywhere in the respiratory system and may also be absorbed into the blood stream;

(b) *skin absorption:* the thickness of the skin together with its natural covering of sweat and grease provide some protection against chemicals, so that only a few are readily absorbed by this route, such as organic solvents and phenols. Chemicals can also enter the body through cuts or abrasions; and

(c) *ingestion:* the swallowing of chemicals is most likely when contaminated fingers are placed in the mouth, or used to handle food or cigarettes. Inhaled particles may be coughed up and then swallowed.

RESPONSE OF THE BODY TO CHEMICALS

Chemicals can cause a response at various sites in the body and at different speeds. Many chemicals are altered by the liver, changing their toxicity. They are excreted through the kidneys in urine and can cause damage as they pass through the liver and kidneys.

Not all people respond to a chemical in the same way. Some are more susceptible (respond at lower doses) than others, depending on various factors such as age, race, sex or state of health. People also vary in the manner of response. The main responses are:

(a) **irritation:**

- *respiratory* - chemicals can irritate the nose and upper lung passages causing sneezing and coughing, and in some cases, bronchitis. They may also affect the surface of the respiratory system and may damage lung tissue;
- *skin and eyes* - when a chemical comes into contact with the skin, a common reaction is dermatitis (a rash). By removing the protective oils from the skin solvents can cause it to become dry, rough and sore. Some chemicals (such as hydrochloric acid and caustic soda) may cause irritation in dilute form, but in concentrated form may have a more severe effect, commonly, called a chemical burn. The eye is extremely vulnerable and the effect of contact with a chemical may vary from mild, temporary discomfort to permanent damage;

(b) **sensitisation:**

- *respiratory* - some chemicals can cause sensitisation leading to asthma. Once a worker is sensitised (to an isocyanate, for example) any further exposure, even minimal, may result in an allergic response of coughing and wheezing. The effect is not always immediate and can occur several hours after exposure;
- *skin* - sensitisation can also occur through contact between a chemical and the skin, and further contact even to minute quantities may cause itching, rashes and other discomfort;

(c) **long-term effects:** the long term effect of greatest concern is cancer, a disorder of cell growth. It arises from a complex interaction between a harmful agent or agents (carcinogens) and a person's own susceptibility. For example, asbestos, as well as causing asbestosis, causes cancers in the windpipe, the

lining of the lung and the abdomen. Exposure to two carcinogens may considerably enhance the risk of developing cancer: the risk increases many times for persons working with asbestos who are cigarette smokers. The effect of exposure may not be seen for many years, and early clinical identification is often difficult;

(d) **reproductive disorders:** other responses to chemicals could include reproductive disorders such as loss of sex drive, infertility in both men and women and foetal damage. Currently there is a lack of reliable evidence for the majority of industrial chemicals: until further research is undertaken, the need for a precautionary policy is paramount, particularly where animal research shows cause for concern.

RESPIRATORY SENSITISERS

There is a direct relationship between the development of asthma and workplace exposure to respiratory sensitisers, rather than an idiosyncratic response in certain individuals. Respiratory sensitisers are substances that, when inhaled, can trigger an allergic reaction causing asthma. Over 200 such sensitisers are currently known. The risk due to exposure to the sensitisers occurs independently of the influence of personal factors such as smoking habits or allergies.

Sensitisation

Sensitisation implies an altered state of reactivity. It may result from physical or chemical damage to the respiratory epithelium (lining), resulting in a lower threshold of irritant reaction, when it is better referred to as increased sensitivity or reactivity. Generally it implies an allergic process whereby the body is ‘sensitised’ by an allergen and reactions such as the production of antibodies are induced. Further exposure results in an allergic reaction which may take several forms. Allergy is a condition of unusual, exaggerated or specific susceptibility to a substance harmless in similar amounts for the majority.

Diseases arising from respiratory allergic sensitisation include: rhinitis, asthma and alveolitis, and industrial injuries benefits are available for several of these conditions.

The term asthma, often used somewhat indiscriminately, is usually considered to be clinically manifested by wheezing, a sense of constriction and coughing - wheezing being the most important.

Asthma can also be caused by chemicals which irritate the respiratory mucous membrane, although this is more contentious than the allergic process.

Incidence rates

Occupational sensitisers are recognised as a major cause of asthma in adults. There are at least 1,000 new cases of asthma *caused* by work every year. The Labour Force Survey estimated that around 70,000 people believe that their asthma was caused or made worse by their work, but TUC estimates suggest that the true figure could be five or six times that.

Allergic rhinitis (nasal allergy)

A typical form is hay fever but it can arise from plants, animals and many dusts. Symptoms are sneezing, running nose, lachrymation and general systemic effects such as 'thick head', headaches, lack of concentration and insomnia.
The condition does not arise on first exposure to the causative agent but only after a period of exposure. It usually starts in childhood or puberty, reaching a maximum in early adult life, then gradually subsiding as a degree of immunity is attained. Nevertheless there may be many years of incapacity when the patient is exposed to the causative pollen or dust.

At one time hyposensitisation by vaccine was considered useful and while it does control some of the more serious cases, it has some risks. More satisfactory treatments include antihistamines, sympathomimetics, corticosteroids and sodium cromaglycate.

Allergic asthma

Allergic asthma is produced by a similar mechanism and is principally manifested by paroxysmal dyspnoea and wheezing. It may impose a severe strain on the pulmonary circulation with consequent heart failure. As a consequence, or as a cause, bronchitis may also be present. Sputum in uncomplicated cases is clear and frothy but when bronchitis is marked, the sputum becomes infected, foul smelling and possibly green. Respiratory function testing reveals diminished vital capacity. Bronchodilators improve the diminished respiratory function.

Over 200 substances are known to cause asthma. The most common experienced at work are:

- dust from flour and grain - affecting bakers and millers;
- dust from wool, insects and laboratory animals - affecting agricultural and veterinary workers;
- tea dust, beans and crustacea - affecting food process workers;
- glues, resins and soldering fumes - affecting metal manufacturers and printers;
- chemicals (especially isocyanates) - affecting chemical workers, hairdressers, printers and health workers; and
- wood dust - affecting carpenters and other woodworkers.

Once established, asthma is a difficult condition to cure, so prevention is critical. Exposure to respiratory allergens should be minimised and respiratory irritants, including smoking, should also be avoided, since bronchitis will itself pave the way for the development of allergic asthma.

Alveolitis

Alveolitis may be of two types. Intrinsic fibrosing alveolitis is associated with many systemic diseases (e.g. rheumatoid arthritis) in which auto-immunity may play a part. Extrinsic (allergic) fibrosing alveolitis arises from a wide variety of organic dusts. Such diseases include farmer's lung; bird fancier's lung; and mushroom worker's

lung. It is distinct from asthma although both conditions may arise in the same patient. It is relatively uncommon compared to asthma but the prognosis is poor.

Mucous membrane disease

Workers with mucous membrane disease are workers with their defence system partly disabled. They are more at risk of infections, colds, even cancer - all diseases caused by inhaled viruses and dirt.
Hundreds of chemicals in use in industry can cause mucous membrane disease. Possible causes include acids and alkalis (such as descalers or stone-cleaning chemicals), glues, epoxies, cement and lime, plastic dusts, pesticides, welding fumes and paint chemicals.

Prevention and health surveillance

While there are test methods for predicting sensitising potential, there are no adequate tests for human safety/risk assessment although animal tests are currently being developed. COSHH assessments for all substances should consider potential allergenicity from published data and by an expert consideration of structural similarity to known sensitisers. Although some sensitised subjects may not react to low levels of a sensitiser, this is difficult to predict. Any acceptance of exposure should be based on expert medical advice.

Anyone who works with chemicals should be trained in proper handling and seek medical advice for wheezing, breathlessness, cough, severe sneezing and lachrymation - mentioning to the doctor the nature of the chemicals they use.

While atopics (ie those reacting to three or more common allergens) may not develop sensitisation more frequently than non-atopics, they may more easily suffer from the irritant effects of inhaled substances, developing asthma or other conditions which simulate respiratory sensitisation. If deemed fit for employment, they warrant special care in the selection of suitable work and possibly in health supervision.

SITE AND SPEED OF RESPONSE

The effects of exposure to a chemical may be local, general or both. A local response occurs at the point of contact such as a burn to the skin following contact with a corrosive chemical, whilst a general response follows absorption into the body, such as a headache, difficulty in breathing and dizziness following inhalation of carbon monoxide. Some chemicals can target specific organs or tissues causing specific effects on parts of the body far removed from the point of entry.

An effect may be acute or chronic. An acute response is immediate, such as inhalation of chlorine causing respiratory irritation. A chronic reaction is much slower, often cumulative following repeated exposures. The effects may build up over days, weeks or even years before symptoms first appear. Acute responses usually clear up quickly once the individual has been removed from the offending environment, but some acute and most chronic diseases require a much longer period for recovery. In some cases the effect on the body is irreversible.

The distinction between acute and chronic effects is vital to an understanding of hazards from chemicals at work. Chronic and acute effects from a particular substance may be very different and protecting against one kind of effect only may not necessarily control the hazards of the other. Here are some examples:

- *asbestos* - no acute toxic effect. Chronic exposure can cause asbestosis, lung cancer and mesothelioma;
- *vinyl chloride* - the acute effect is drowsiness but long term exposure at levels far too low to cause acute effects may cause liver damage, bone damage and cancer; and
- *carbon monoxide* - acute effects include headaches, asphyxia and death. Repeated exposure to lower concentrations is associated with heart problems and nerve damage.

FINDING OUT ABOUT HAZARDOUS SUBSTANCES

The hazards of dangerous substances are often difficult to detect. Safety Reps need a strategy to help identify potential problems *before* they occur and control chemical hazards at work *before* any damage is done. This will involve:

- getting full information on substances used at work from the employer, from suppliers, and from other sources such as the HSE;
- using published information to add to and check up on information from employers and suppliers;
- testing substances and monitoring the atmosphere at work; and
- controlling chemical hazards by taking steps to clean up the workplace.

Duties: employers

Under HASAWA employers' general duty to their employees extends to arrangements for ensuring, so far as is reasonably practicable, safety and absence of risks to health in connection with the use, handling, storage and transport of articles and substances and the provision of any necessary information, instruction training and supervision for employees. This duty is spelled out further in COSHH.

Duties: manufacturers, importers, suppliers

Manufacturers of substances have a specific duty under Section 6 (5) of HASAWA. They must carry out any necessary research with a view to the discovery and, so far as is reasonably practicable, the elimination or minimisation of any risks to health or safety to which the substances may give rise. Thereafter, manufacturers, importers and suppliers need to:

(a) ensure, so far as is reasonably practicable, a substance is safe and without risk to health;
(b) carry out necessary testing and examination; and
(c) make available adequate information on test results and about necessary conditions for safe use.

Labelling of dangerous substances

Correct labelling is a useful first source of information on chemicals. The Chemicals (Hazard Information and Packaging for Supply) Regulations and associated Approved Guide and ACoP provide a comprehensive system for classifying and labelling dangerous substances, including mixtures and preparations.

These Regulations provide for the use of 'supply labels' and 'conveyance labels'. The prime function of supply labels is to warn/inform the user of both acute and chronic exposure hazards. The label must be on the receptacle from which the dangerous substance is to be dispensed. The prime function of 'conveyance labels' is to warn/inform the transporter, emergency services and the public. Labels must be on those layers of packaging liable to be handled during conveyance and need only take into account the acute risks posed by the substance.

Although the label may meet the requirements of the Regulations, suppliers must make further information available to comply with Section 6(4)(c) of HASAWA. The HSE recommend that such additional information should be referred to on the label.

Data Sheets

Data sheets or hazard information sheets about substances should be provided by suppliers. They are a very important source of data and often the most convenient and relevant way of getting further information.

COSHH REGULATIONS

KEY FEATURES OF THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002 (COSHH) (as amended)

Scope

COSHH applies to all substances classified as being very toxic, harmful, corrosive, or irritant under the Chemicals (Hazard Information and Packaging for Supply) Regulations. It also applies to all other substances hazardous to health arising from work activities. In addition, COSHH applies to micro-organisms but does not cover the hazard of infection arising directly from a person suffering from a disease (except where that person is an inpatient at a hospital).

Assessment

The key provision of COSHH, from which other elements follow, is the requirement for the employer to carry out an assessment of likely risks to health to employees arising from exposure to hazardous substances. The purpose of such an assessment is to enable a decision to be made about measures necessary to control the substances. It allows the employer to show: all the factors pertinent to the work have been considered; an informed and correct judgement has been reached about the risks and the steps which need to be taken to achieve and maintain adequate control; the need for monitoring exposure at the workplace; and the need for health surveillance.

HSE guidance on assessment stresses that it should allow for a systematic review to consider which substances or types of substances workers are liable to encounter, what are the effects of those substances, where the substances are likely to be present and the ways and the extent to which any groups could potentially be exposed. Under the Regulations and the general ACoP, the degree of detail involved in its preparation has to be commensurate with the nature and degree of risk arising from the work. Key issues here, concern:

- the degree of detail and rigour appropriate to the assessment procedure in various circumstances;
- the competence and qualifications of persons carrying out the assessment;
- the degree of reliance to be placed on manufacturers' and suppliers' information;
- the need for written procedures and records; and
- consultation with Safety Reps.

Control and exposure limits

The COSHH Regulations require employers to take steps to prevent or adequately control exposure to hazardous substances.

In April 2005 a new system of exposure limits was introduced. Maximum Exposure Limits (MELs) and Occupational Exposure Standards (OESs) have been replaced with a single type of limit; the Workplace Exposure Limit (WEL). Most of the MELs and OESs have retained their previous numerical values when becoming WELs.

Adequate control of exposure requires employers not to exceed the WEL and to ensure that eight principles of good practice (Schedule 2A of the COSHH Approved Code of Practice) are followed. Where a substances does not have a WEL (eg, substances for which the route of exposure is not through inhalation) the eight principles should still be applied. The principles are:

(a) Design and operate processes and activities to minimise emission, release and spread of substances hazardous to health.

(b) Take into account all relevant routes of exposure – inhalation, skin absorption and ingestion – when developing control measures.

(c) Control exposure by measures that are proportionate to the health risk.

(d) Choose the most effective and reliable control options which minimise the escape and spread of substances hazardous to health.

(e) Where adequate control of exposure cannot be achieved by other means, provide suitable personal protective equipment in combination with other methods.

(f) Check and review regularly all elements of control measures for their continuing effectiveness.

(g) Inform and train all employees on the hazards and risks from the substances with which they work and the use control measures developed to minimise the risks.
(h) Ensure that the introduction of control measures does not increase the overall risk to health and safety.

The list of exposure limits, Schedule 2A of the COSHH ACOP and a guide to the Regulations are available at: www.hse.gov.uk/coshh/ and practical advice on safe use of chemicals can be found at: www.coshh-essentials.org.uk.

Use of control measures

Every employer who provides any control measure to ensure that it is properly used and every worker to make full and proper use of any control measures provided.

Maintenance, examination and testing

Controls should be maintained in efficient working order and in good repair. The employer should ensure that thorough examinations and tests of engineering controls are carried out; in the case of local exhaust ventilation plant this should be done at least once every year. Respiratory protective equipment has to be examined at suitable intervals, and, for all control measures a record (or summary) of the examinations has to be kept for five years.

Employers should ensure that all control measures perform as originally intended, thereby continuing effectively to prevent or adequately control exposure.

Monitoring exposure

Monitoring of exposure should be carried out when it is required to ensure that exposure is adequately controlled. It is required when failure or deterioration of the control measures could result in a serious risk to health or where it is necessary to demonstrate that a WEL is not exceeded. A record should be kept showing when the monitoring was done, what monitoring procedures were adopted and what the results were.

Health surveillance

Where it is necessary for the protection of the health of workers, the employer should ensure that they are under suitable health surveillance. Health surveillance should be treated as being appropriate where the worker is exposed to one of the substances listed in Schedule 6 to the Regulations. Health surveillance also has to be carried out where the exposure of the worker is such that an identifiable disease or adverse health effect may be related to the exposure, where there is a reasonable likelihood that the disease or effect may occur under the particular conditions of work and there are valid techniques for detecting signs of the disease or the effect. Any judgement as to the likelihood that a disease or adverse health effect may occur must be related to the nature and degree of exposure.

Information, instruction and training

Workers must be given sufficient information, instruction and training to enable them to know about the risks involved and the precautions which should be taken. They are also entitled to know the results of environmental monitoring and the collective results of any health surveillance.

TESTING SUBSTANCES AND MONITORING THE AIR AT WORK

Carrying out tests is an essential part of identifying, assessing and controlling toxic substances. Tests may need to be carried out by a specialist industrial hygienist (though some gas detectors work like breathalysers and can be used by anyone for spot cheeks), but the essential principles of monitoring the tests are clear, and there is no reason why Safety Reps should not ask for particular types of monitoring and receive and respond to test results.

Identification of a substance can be done in a number of ways. It can be mixed with other chemicals - the way it reacts may indicate what it is. Or the material can be vapourised in a spectrometer - light rays are shone through the vapour, and the direction and colours of the beams which emerge can be used to indicate what the substance is made of.

The extent of contamination by known substances can be measured in three basic ways:

- a sample of air is blown through a collector or filter, and the amount of air passing is recorded on a meter. The filter is weighed or inspected with a microscope, because the size range of the particles affects the proportion of dust which can be breathed deeply into the lungs;
- after the sample is counted or weighed, the results can be compared with the air volume sampled - the result can then be expressed as parts per million or milligrams per cubic metre or fibres per cubic centimetre; and
- gases and vapours can be measured by blowing air through a chemical which changes colour when exposed to the substances in the air. The extent of the colour change shows the amount of pollution.

There are different kinds of test equipment. They vary in price and accuracy - some need to be backed up by laboratory analysis of samples.

- *personal samplers* are worn during work - air is sucked from the workers' breathing zone and passed through a filter. At the end of the test period the filter can be examined to show the amount of pollution in the metered sample of air;
- *indicator tubes* are like breathalysers - a small hand pump is used to pump a known volume of air through a glass tube of test chemical. The extent of discolouration of the test chemical shows the amount of pollution present. You have to know what substances you are looking for to choose the right test chemical and the accuracy varies according to which substance you are testing for. The advantages of this method are cheapness, ease of use, and immediate results without the need for laboratory analysis. The most common type of pump is the ‘Draeger’ meter. You may want to ask management for the use of one;

- *continuous monitoring equipment* is sophisticated test equipment which can indicate average levels of contamination as well as recording how levels change at different times during the working day. Some types can be set to sound an alarm or to shut a process down when a pre-set level of contamination is exceeded. Continuous monitoring equipment is now made to detect a number of common industrial chemicals. The machine used depends on the substance being monitored. The equipment can be expensive and would normally be used for special surveys or to monitor high risk processes; and
- *dust lamps* show where invisible dust clouds are present, and how the dust flows in the air. This is very useful for checking the effectiveness of ventilation systems. They are cheap - in fact any bright light beam in a darkened room can be used.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Control at source is the primary objective. In practice it may be that personal protection has to be used, such as respirators, goggles, helmets, overalls, gloves, aprons and boots.

Personal protection should be treated as a last resort or as a temporary measure to deal with emergencies or other special operations. However, personal protection may offer the only answer to a problem or be a part of a range of control measures.

DUST EXPOSURE

Dust at work has been one of the largest occupational killers of all time. It has shortened lives and caused misery to hundreds of thousands, often after a lifetime's work. Whenever materials are handled or broken down, dust is liable to be produced:

- *silica dust* kills and disables workers in areas such as coal mines, quarries, foundries and brickworks;
- cotton *and flax dust* affects textile workers;
- *lead dust* poisons workers in many industries;
- *flour and cereal dust* cripples millers and bakery workers with occupational asthma;
- *wood and leather dust* causes nasal cancer amongst workers in furniture and shoe-making; and
- *radioactive dusts* in tin, iron and flour-spar mines kill miners with lung cancer.

Dust can cause:

- lung damage, such as bronchitis, emphysema, pneumoconiosis, asthma, or even cancer;
- damage to the nose and throat, leading to colds, and other infections, or even nasal cancer;
- skin damage: dermatitis, ulcers and skin cancer;
- eye damage, including conjunctivitis; and
- internal effects including damage to the brain and nervous system, blood disorders, stomach cancer, liver and kidney disease, or bladder cancer.

It can cause explosions: many dusts - including flour, rubber, coal dust and metal dusts - can explode when in confined spaces, sometimes causing destruction of whole factories.

Dust can also affect productivity and cause product damage. No dust should be regarded as 'safe', even some alleged nuisance dusts have turned out, in the light of further research, to be a real danger to health.

HOW MUCH DUST IS TOO MUCH?

That depends on the composition of each dust - for example how poisonous it can be; its particle size - for example whether it can get into the lungs; and how long you are exposed to it.

For some dusts, experts have decided the amount of the respirable fraction for each which should be regarded as too much - called the *exposure limit.* A list of exposure limits is published by HSE in Guidance Note EH40, revised annually.

HOW CAN DUST BE MEASURED?

By using:

- a dust lamp (or Tyndal Beam) to show up the damaging invisible dust and where it's coming from;
- portable sampling pumps with filter heads fixed near workers' breathing zones which measure how much dust they are breathing in; or
- continuous dust monitors that measure dust concentrations at any one moment continuously throughout a shift.

If the dust in your workplace is likely to be dangerous, your employer should arrange for dust level measurements to be carried out at regular intervals. HSE Inspectors can also do dust monitoring. Safety Reps have a legal right to see the results of any dust monitoring carried out by the HSE or the employer.

13. *BIOLOGICAL HAZARDS*

Biological hazards encompass anything of a biological nature which has the potential to cause harm to human beings. It includes viruses and bacteria which can cause infection and disease or harmful by-products of living things.

In some cases there are infectious organisms which are innately part of the job exposure (such as those found in health care work in hospitals and the community) or are incidentally part of job exposure such as those found in sewer work or agriculture. There are now also micro-organisms which have been deliberately genetically altered for use in industrial processes.

Examples of occupationally acquired infections include:

Source	Infection	Occupations at risk
Isolation/study of pathogens	Various	Laboratory workers and other health service staff
Human tissues and body fluids	Hepatitis, tuberculosis, enteric infections, HIV infection	Health care and mortuary workers, emergency services
Animals/Animal Products	Anthrax, brucellosis, leptospirosis, Q fever, chlamydial infections, salmonellosis, rabies, orf, erysipeloid, toxoplasmosis	Agricultural workers, animal handlers, vets, abattoir workers, processors of animal products
Arthropods		Shepherds, foresters
Sewage/polluted water	Lyme disease	Sewage and water workers
Soil	Salmonellosis, shigellosis, hepatitis A, leptospirosis	Agricultural and construction workers, gardeners
	Tetanus and other clostridial infections	

Risk assessment: employers are required to carry out suitable and sufficient assessment of the risks of any work with biological agents likely to be hazardous to the health of employees and the steps needed to comply with the Regulations. Assessments must be reviewed regularly, especially if there is reason to suspect that they are no longer valid or if there has been a significant change in the work.

Control of exposure: COSHH requires employers to ensure that exposure of employees to substances hazardous to health, including micro-organisms, is either prevented or (if this is not reasonably practicable) adequately controlled.

Prevention may be effected by substituting a non-pathogenic organism for a harmful one or treating organisms in such a way as to render them harmless. Control of exposure should be secured, where reasonably practicable, by means other than personal protective equipment. In a laboratory context, this would mean organisms that could not be safety handled on the open bench would be handled in a safety cabinet, isolator or equivalent means of containment..

Storage, transport and disposal: microbial hazards should be stored safely and securely in robust containers with adequate labelling. Correct packaging and labelling is also essential for transportation of organisms and appropriate Regulations must be

complied with. Microbiological agents can be inactivated by steam sterilisation or other appropriate heat treatment and incineration is normally the preferred mode of disposal.

Maintenance of control measures: COSHH requires employers to take all reasonable steps to ensure control measures are complied with and that equipment is maintained in an efficient state, in efficient working order and in good repair. Local exhaust ventilation (including microbiological safety cabinets) must be examined at least once every 14 months. Respiratory protective equipment must also be examined regularly. Suitable records of examinations and tests must be kept for at least five years.

Monitoring exposure and health surveillance: exposure of employees to biological hazards must be monitored using a suitable procedure which is requisite for ensuring the control of exposure or protection of health of employees. There are no occupational exposure limits for work with micro-organisms and, in many cases, environmental monitoring is not appropriate.

COSHH also requires that employers must provide suitable health surveillance where an identifiable disease may be related to exposure; there is a reasonable likelihood that the disease will occur under conditions of work; and there are valid techniques for detecting the disease. Surveillance may include the completion of a health questionnaire, medical examination, tests of immune status or evidence of infection, provision of contact cards and immunisation where appropriate. Health records must be kept for at least 40 years from the date of the last entry.

Training: employers must provide suitable and sufficient information, instruction and training, for employees and others exposed to microbiological hazards, on the associated risks to health and the necessary precautions to be taken. This includes results of workplace monitoring and the collective results of health surveillance.

HEPATITIS B

Hepatitis B is the name given to a viral inflammation of the liver. This virus is transmitted mainly by contact with human blood (but also occasionally by other routes). It is a risk where there may be contact with blood or excreta. The symptoms of the disease are vague to start with and may include fatigue, abdominal discomforts, skin rashes, nausea and vomiting. These may be followed later by the classic symptoms of hepatitis including brown urine, pale stools, and jaundice (the skin and whites of eyes turning yellow). However, many infected people have no symptoms at all. Diagnosis is confirmed by a blood test.

About 95% of people who contract Hepatitis B recover from it completely in up to six months. A small percentage however cannot produce antibodies to fight the disease which can then become chronic. Chronic hepatitis may lead to liver damage, and in some cases, even death. Approximately 10% of hepatitis B sufferers will become carriers of the virus. This means that they remain permanently infectious to other people and should take precautions to avoid passing the virus to others.

One of the commonest modes of infection is a sharps injury: accidental penetration of the skin by needles, glass instruments or slides that have been used in treating hepatitis B patients. Infection can also occur when the virus enters the body through minor cuts and abrasions if contact is made with infective blood, blood products, or sometimes other bodily secretions. One of the problems here is that the infection can be passed on from individuals who show no signs of having the disease.

Prevention

The first line of approach to controlling hepatitis B risks involves the adoption of work practices designed to prevent contact with sources of infection. When dealing with blood or other body fluids, strict procedures have to be applied to control the possibility of infection - for example wearing protective gloves and aprons; eye and mouth protection where there is a risk of splashing; immediately clearing up and disinfecting after spillages; and safe disposal or thorough disinfection of equipment, clothing and linen contaminated with body fluids. Cuts, grazes and breaks in the skin should be covered with waterproof dressings.

Where blood and other samples suspected to be contaminated with hepatitis B are handled in laboratories, strict guidelines must be observed. Strict procedures should also be followed by operating theatre staff. Proper procedures must be adopted for the safe disposal of infected wastes and all sharps. All skin cuts and punctures should be allowed to bleed then washed with soap and warm water and reported.

Where contamination has occurred, it is possible to administer immunoglobulin which, if given within 24 hours of infection, will limit the course of disease. All those with contaminated sharps injuries for example should seek this treatment. Long-term protection is given by hepatitis B vaccines, which should be offered to all staff at high risk of contracting hepatitis at work. This vaccine is considered to be 95 per cent effective in preventing development of the disease.

AIDS/HIV

Acquired Immune Deficiency Syndrome (AIDS) is a very serious condition caused by a virus that attacks the body’s natural defence system against infection and disease. The virus responsible is Human Immunodeficiency Virus (HIV). At present there is still no cure for AIDS and the disease is fatal. Not everyone who has been infected by the virus has developed AIDS but they can still pass the virus on to others.

HIV is transmitted in various ways, including by inoculation with blood or body fluids from a person infected with the virus. This means that HIV can be a source of risk to health care and other workers who come into contact with blood and body fluids from AIDS patients or carriers who may thus be at risk of inoculation through accidental contamination of cuts or abrasions - for example through sharps injuries.

Prevention

Precautions adopted to protect employees from other sources of blood-borne viruses are appropriate to prevent infection from HIV. The following measures should be taken:

(a) ensuring that equipment used in the workplace will not, so far as is reasonably practicable, present a risk of cutting, abrasions or puncture wounds;
(b) anyone who sustains an injury that may result in bleeding should cover the wound;
(c) spillages of blood or body fluid should be cleared up as soon as possible by someone using disposable protective gloves;
(d) contaminated needles or other sharps and any waste resulting from blood, etc spillages or cleaning wounds should be disposed of safely; and
(e) first-aiders should be trained in, and be provided with the necessary equipment for, preventing contact with body fluids when administering first-aid or disposing of clinical waste.

Whether or not a person is known to be HIV positive all workers coming into contact with blood and body fluids should cover exposed cuts and abrasions (especially on the hands and fingers) with waterproof dressings and take care to prevent puncture wounds, cuts and abrasions from sharps. Such accidents should be treated immediately by encouraging bleeding and liberally washing with soap and water. Puncture wounds or contamination of broken skin, mouth or eyes should be reported and recorded.

Spillages contaminated by blood and body fluids should not be tackled without suitable protection and the work should be done strictly in accordance with local rules. The hands and any other exposed parts of the body should be washed after contact with contaminated material.

NEEDLESTICK INJURIES

Needlestick injuries are skin punctures caused by hypodermic needles. If the needle was used by a person infected with a blood-borne virus (including hepatitis B and C and HIV), the virus could be transmitted to a worker subsequently injured by the same needle. The following is advice which should be followed by employers:

Prevention

1. **Assess the risk of needlestick injuries in individual tasks** - employees who clean or service areas used by the general public are likely to be at risk as well as those whose work normally involves the use of syringes. Information about previous needle finds in those areas will be particularly relevant to the assessment (see point 5).

2. **Prevent exposure wherever reasonably practicable** - two examples of prevention are:

   (a) the introduction of wheelie bins to replace plastic sacks on domestic refuse rounds has significantly reduced sharps injuries to refuse collectors; and
   (b) car recovery drivers placing boards over the seats of stolen vehicles in case needles have been place in the upholstery.

3. **Control the risk** in all other circumstances. Provide staff at risk with safe systems of work and appropriate equipment, such as:
   (a) disposable tongs;
   (b) stout rubber gloves; and
   (c) a sharps box (which may be bought from the health authority).

   You may be able to make arrangements with the local authority cleansing department to dispose of used needles.

   Employees should **never** be expected to use their bare hands to clear rubbish or unblock toilets on premises suspected of having been used by drug users.

4. **Evaluate the proposed control measures**. They are unlikely to be used if they are not practical.

5. **Have a needle reporting system**. Information on where needles are found is essential for an effective policy. Where the source can be clearly identified, it may be possible to give advice on safe disposal. Inform the enforcing authority if another employer (or self-employed person) continues to put workers at risk by careless disposal of needles.

6. **Inform, instruct and train.** Employees need to understand what to do if they find used needles, the risks involved and the reasons for any precautions. Be sure to keep information on the risks in perspective and in line with the results of your COSHH assessment.

7. **Consider vaccination of these at particular risk**. It is not generally recommended that all employees should be vaccinated against hepatitis B because the emphasis should be on preventing exposure. However, consider vaccination for any high risk groups identified by the COSHH assessment.

8. **Draw up a contingency plan for counselling.** Employees who may receive needlestick injuries should be offered counselling and referred to an occupational health physician.

9. **Follow up all incidents**. Needlestick injuries are not reportable under RIDDOR but any resulting infection may be.

LEGIONNAIRES DISEASE

Legionnaires Disease is a type of pneumonia caused by a bacterium Legionella pneumophila which is commonly found in soil but which can establish itself in water systems in plants and buildings. Certain materials have been known to harbour the organism such as shower heads and rubber gaskets use in hot water systems. Infection may occur when fine water droplets containing the bacterium are breathed in. Incubation usually takes two to ten days.

Most cases have occurred in hotels and hospitals: people in poor health are more likely to be affected. Typical symptoms of the disease are fever, persistent cough, muscle aches, chills, headaches and diarrhoea. The lungs are often affected and

other organs such as the kidneys, liver, stomach and nervous system may be involved. The disease has a death rate of between one-in-four to one-in-ten of all those affected. The disease is confirmed by blood tests.

When the prevailing conditions favour proliferation of the bacteria, the potential for an outbreak of legionnaires disease exists. Proliferation is favoured by the presence of sludge, scale rust and algae which, directly or indirectly, provide necessary nutrients, and also by the appropriate temperature.

Contaminated water only presents a risk when it is dispersed into the air in the form of an aerosol (very fine water droplets/spray). Thus, water systems which are likely to generate aerosols are the most susceptible. Systems presenting the greatest risk are those involving cooling towers and evaporative condensers such as air conditioning plants and industrial cooling systems where typical temperatures are around 30^{o}C.

The Notification of Cooling Towers and Evaporative Condensers Regulations 1992 require persons in control of non-domestic premises to notify their local authority on an HSE approved form, of any 'notifiable devices' situated on their premises. The Regulations define these as all cooling towers or evaporative condensers - except where the water is not exposed to air and the water and electrical supplies are not connected. Also at risk are whirlpools and spas, showers and fire sprinkler systems. Water systems are also capable of generating aerosols as water hits basins and dead legs in hot water systems will favour multiplication of the bacteria.

Any changes which make the original notification invalid, or a cessation in the use of notifiable devices (other than for maintenance, etc) must be notified to the local authority within one month of the change or as soon as possible after the cessation, respectively.

Once features which favour contamination have been identified, the risk of infection can be minimised by good engineering practice in the design, construction, operation and maintenance of water installations.

Practical and technical information on the prevention and control of legionellosis are given in an ACoP and Guidance.

Prevention

Measures to control Legionnaires Disease cover disinfection and chlorination and thorough draining and regular inspection of all cooling towers and evaporative condensers. This is recommended at least twice-yearly and cleaning should involve use of anti-scaling compounds and algicides to reduce opportunities for colonies of the bacterium to build up. This advice also applies to reservoirs and pipe work of humidifiers which should be regularly disinfected, drained, thoroughly inspected and cleaned. Water in cold water systems should be kept as far as possible below 20^{o}C since at this temperature the growth of the bacterium is restricted. At the other end of the scale hot water should be stored at a temperature of not less than 60^{o}C. Where such water passes through shower heads and similar fittings these should be

regularly disinfected and there should also be regular microbiological monitoring of water.

Wherever systems which use recirculated water are in use, regular inspection and assessment of risk should be undertaken, and operational engineering staff should be provided with detailed guidance on the operation and safe maintenance of such systems. Systems should also be regularly reviewed to see whether possible risks such as zones and conditions in which bacteria can multiply can be eliminated through changes in practice and design.

14. *SKIN HAZARDS*

The skin is the largest organ of the body: the total skin area of an average man is about 100 square feet - the skin can provide natural protection, as long as it is not damaged by cuts or subjected to irritation or injury. Injury to workers' skin can be caused by burns, cuts, abrasions and work-induced skin cancer and dermatitis. The face, neck, hands and forearms are most affected because they are the most exposed, and thus most easily contaminated.

CHEMICAL IRRITANTS AND SENSITISERS

Many substances can, in contact with the skin, cause irritation. The resulting condition (known as dermatitis) may be just a reddening of the skin with a mild itching, a rash or in some cases open weeping sores. Substances which cause dermatitis can be gases, liquids or solids. Workers dealing with plating, adhesives, solvents, enzymes, detergents, photographic developers, bleachers or paints are at risk. Solvents used for degreasing and other cleaning operations will remove the skin's natural oils leaving it unprotected.

Some chemicals not only irritate the skin but also cause an allergic rash. This is called 'sensitisation' and sensitised workers can develop a severe reaction if subsequently exposed to even a tiny amount of the chemical involved. Resins, both natural and synthetic, are among many hundreds of chemicals that cause skin irritation or sensitisation. Epoxy resins can irritate the skin and can cause an allergic reaction in some workers.

MECHANICAL DAMAGE

This includes cuts and grazes caused by sharp edges, splinters or fragments. Friction or pressure on parts of the skin can also cause blisters, 'friction burns' and patches of hard skin. Besides being painful, any breaks in the skin can allow infections and chemicals to get in. These hazards can be avoided by improved work systems, the use of guards and protective equipment.

CORROSIVE SUBSTANCES

Some chemicals such as strong acids and alkalis cause chemical burns when in contact with skin that are very similar to those caused by heat. Both destroy skin tissue. Corrosive chemicals cause damage until removed or neutralised or the corrosive reaction is complete. Corrosive-resistant protective clothing and ventilation are needed to prevent chemical burns.

The first treatment for every chemical burn is to flood the affected area as quickly as possible with water; even a few seconds delay can be very serious. Contaminated clothes should be taken off immediately. It is extremely important that emergency showers are available near to where they might be required, for example chemical manufacture.

Eye burns are very serious and no time should be lost in washing with large quantities of water; preferably by a properly designed eyewash fountain using large amounts of low-pressure water - a forceful jet could cause mechanical damage.

To prevent infection of the wound, loss of body fluid and shock, medical attention should be sought for treatment of all but the most trivial of burns. Corrosive chemicals need not necessarily be liquids - they can also be gases or solids.

PHYSICAL AGENTS

Burns can also be caused by extreme heat, cold (frostbite) and radiation, including sunlight. People working in hot conditions may suffer from heat rashes caused by blocked skin pores and friction. Over-exposure to the natural radiation in sunlight can even cause skin cancer. Protective equipment should be provided to prevent skin contact with hot surfaces or radiations, for example ultra violet light.

SOLVENTS

Solvents are used to clean things by dissolving grease and oils. They will also dissolve the protective coating of oil in the skin when in direct contact. Unfortunately, the more efficient the solvent, the more harmful it is to your skin. Many substances act as solvents: water, soaps, detergents, metal degreasers, cleaning fluids and thinners. Direct contact between skin and solvent should be avoided by using impermeable protective clothing and good ventilation to get rid of vapours. Strong solvents are the most damaging to the skin, so the weakest solvent that will still do the job should be used. Solvents like ‘trike’, meths or toluene should never be used to clean dirt or oil off your skin. After cleaning with a mild soap, conditioning cream will replace natural oil in the skin and prevent chapping. Oils and petroleum products also act as solvents or have solvents added to them. The most serious effect on the skin is cancer, but dermatitis and acne are also caused by skin contact with these.

PREVENTION

Preventing skin damage entails controlling exposure to any of the above harmful agents either by selecting a less harmful substance or changing working methods, by isolating the operators by use of protective clothing or by ensuring high standards of personal hygiene.

More damage can be done to workers’ hands by removing contaminants after work than by anything else, where strong solvents are used to clean up. Only mild soaps and special cleansers should be used. Cleansing is a balancing act: try to remove the contamination without removing all the natural oil in the skin. After cleansing clean towels or hot air dryers should be provided and conditioning creams help to replace natural oil in the skin.

PROTECTION: GLOVES

For complete protection, guards, enclosures and mechanical handling devices may be necessary for safe working with damaging substances. Personal protection

should be regarded as a second line of defence, but where necessary, it should be the correct type.

Gloves are the most common form of protection against skin diseases. Guidance in the Personal Protective Equipment (PPE) at Work Regulations 1992 gives details of processes and activities that involve risk of injury to hands with an explanation of suitable protection and standards for gloves.

Among the main types are heat resistant leather, chrome leather and asbestos-substitute for intensely hot work. For work where there is a risk of severe abrasions and cuts, chrome leather reinforced with chain mail mesh is necessary; whilst for work involving acids, alkalis and other corrosive oils and solvents, gloves made from PVC, natural rubber, Neoprene or Nitrile should be used. Expert advice should be obtained on the right type of gloves and methods of repair and use of non-disposables where necessary. When working with toxic substances that can be absorbed through the skin particular attention should be paid to permeability and 'break through' times for protective gloves.

The PPE Regulations and Guidance also cover:

– application to non-employees ie school children on work experience and trainees, self-employed workers (Reg 3);
– appropriateness of the PPE to suit the job, ergonomic requirements and state of persons health, to fit the wearer correctly (Reg 4);
– compatibility of different sorts of PPE (Reg 5);
– employers to make an assessment of risks and select 'suitable' protection (Reg 6);
– employers must ensure that all PPE is maintained, cleaned or replaced as appropriate, in efficient working order and in good repair (Reg 7);
– accommodation to be provided for PPE to protect it from contamination, dirt, loss or damage (Reg 8);
– employers to provide employees with information and training about why PPE is being used and how it should be used and how to maintain it (Reg 9);
– employers to ensure that PPE is used properly. It is not enough just to make PPE available (Reg 10); and
– employees to report loss or defect of PPE (Reg 11).

Barrier creams may be used in conjunction with gloves but should not be used as the only protection. There are so many complex creams manufactured that expert advice is necessary to choose the right type for the particular job. The companies who manufacture barrier creams supply dozens of different types; some of them supply a skin care service to give advice and meet specialist needs.

15. *IONISING RADIATIONS*

Ionising radiations occur in nature and can be produced artificially but they cannot be detected by the human senses. Everyone experiences a certain amount of radiation exposure both from sources such as cosmic radiation and as a result of inhalation and ingestion of naturally occurring radioactivity. Artificial radioactivity has been used for decades in fields such as medicine and other sciences and in industry - especially, in large quantities, in nuclear reactors.

Radiation is inherently harmful to living tissue and people must be protected from excessive or unnecessary exposure. Normally, our greatest exposure is to radiation of natural origin and exposure to sources such as radon gas in houses or underground mines can be relatively high. But it is possible to control exposure to radiation of artificial origin and the law requires that doses of radiation to workers and the public be minimised and certain limits must be observed.

WHAT ARE IONISING RADIATIONS?

Radiation means electromagnetic waves such as light, radio waves and X-rays, and the particles emitted by radioactive materials. These particles and the more energetic of electromagnetic waves produce electrically charged particles - called 'ions' - in the materials which they strike. This process of ionisation can cause changes in cells of living tissue, which, if severe enough and not counteracted by the body's defence mechanisms, can lead to ill health effects such as mutations or cancer. Radiations produced by ultraviolet lamps, lasers and radio transmitters do not have sufficient energy to cause ionisation, and are only hazardous under certain circumstances.

Ionising radiations most commonly encountered are:

- **Alpha (α) particles:** easily stopped, they do not penetrate the skin. Radioactive materials that emit alpha particles are hazardous if swallowed or breathed in, or if they enter the body through a wound. Once inside the body they can increase the radiation dose of tissue in which they are absorbed;
- **Beta (β) particles** (electrons) have greater penetrating power but are generally stopped by glass or metal. Beta emitters can also be hazardous if taken into the body; and
- **Gamma (γ) radiation and X-rays** can penetrate relatively great thicknesses of matter before they are absorbed but can be screened by lead, concrete or water.

The activity of all radioactive materials decays with time. Each material has a 'half-life', the time taken for the radioactivity to decay to half its original value. In two half-lives the radioactivity is reduced to a quarter of its original level, and in ten half-lives to about one thousandth. Half-lives vary from fractions of a second to millions of years. In general the most radioactive materials, emitting intense penetrating radiation and requiring heavy shielding, decay to negligible levels relatively rapidly.

RADIATION DOSE

Absorbed doses of radiation are expressed in terms of a unit called the Gray (Gy), the amount of energy absorbed in any sort of matter. Biologically, not only is the amount of radiation important, but also its type: equal absorbed doses of different types of radiation do not necessarily have the same effect because of the way they yield up energy as they pass through tissue. In radiation protection, a second unit taking these differing effects into account is used: the Sievert (Sv).

One Sievert of alpha radiation delivered, for example, to the thyroid is reckoned to create the same risk of inducing a cancer as one Sievert of beta or gamma radiation. However some tissues are more sensitive to radiation damage than others so the magnitude of the risk differs for different organs.

The overall risk of exposing the whole body to radiation is assessed by adding together the individual risks of harm to each affected organ. If the dose received by each organ is multiplied by an appropriate weighting factor to take account of its sensitivity, the sum of the products is called the effective dose equivalent, commonly abbreviated to 'dose', also measured in sieverts. Sieverts are very large units, and dose equivalents are more commonly expressed as:

- a microsievert: one-millionth of a sievert; or
- a millisievert: one-thousandth of a sievert.

Doses of tens of grays to small regions of the body are used in radiotherapy to destroy cancerous growths. At the other extreme, a typical chest X-ray gives about one-fiftieth of a millisievert.

RADIATION EFFECTS

If the whole body is exposed to very high doses of radiation, damage to tissue is so great that the body is unable to recover and death is almost certain. Instantaneous doses of 10Sv or more lead to severe radiation sickness and are almost invariably lethal. If such doses are limited to specific parts of the body, there is a possibility of recovery. Exposure of the testes to this kind of dose is likely to lead to sterility or possibly gross hereditary damage to descendants.

Below the relatively high dose levels which can cause this kind of acute radiation damage, radiation exposure produces no readily visible symptoms, but it raises the chances of those exposed developing ill effects such as cancer which may not appear until some time later. This is because, when radiation energy is absorbed in living tissue, it can cause very small changes in the genetic material (DNA) which carries the coded information necessary for the successful functioning of the body's cells.

Radiation can affect both the individual receiving the dose (somatic effects) and subsequent generations (hereditary effects).

PRINCIPLES FOR PROTECTION

The measures used to control radiation and minimise associated risks are elaborate and extensive and are based on recommendations of the International Commission on Radiological Protection (ICRP) and its recommendations form the basis for legislation and practice in most countries, including these general principles:

(a) every practice resulting in an exposure to ionising radiation must be justified by the benefit it produces;
(b) all exposures shall be kept as low as reasonably achievable; and
(c) doses shall not exceed certain limits.

Applying these principles in practice means using engineering controls and design features (such as shielding, containment, distance from radiation sources, warning lights etc) and working procedures to reduce exposure of workers and the public.

ICRP recommends that those whose occupations expose them to radiation such as X-ray technicians and nuclear industry workers, should not receive a dose greater than 50 mSv per year. For the public the lifetime average dose should not exceed 1 mSv per year. The National Radiological Protection Board (NRPB) have recently advised that in future, radiological activities should aim to control possible exposure of workers to less than 15 mSv per year (averaged over a lifetime) and exposure of the public to below a level of 0.5 mSv per year from a single installation.

The ICRP have placed particular emphasis of the idea of keeping doses as low as reasonably achievable (ALARA). As no radiation dose is entirely free from risk, doses should be reduced whenever and wherever that can be done by reasonable means.

LEGISLATION

The Ionising Radiations Regulations 1999 replaced earlier radiological protection legislation. They have wide application throughout industry, transport and public services, universities, hospitals and research institutes - in fact any work in which ionising radiations or radioactive substances are encountered.

The Regulations cover dose limitation (ALARP), dose limits, designation of controlled and supervised areas, designation of classified persons, requirements for dose monitoring and assessment, arrangements for the control of radioactive substances, and monitoring of ionising radiation. They require hazard assessments and the investigation and notification of over-exposure.

The Regulations require radiation protection advisers to be appointed whenever expert advice is needed and their appointment has to be notified to the HSE. They also require the appointment of appropriate radiation protection supervisors and the formulation and enforcement of effective local rules. The employer has to make an assessment of possible hazards before commencing work and to prepare contingency plans to deal with foreseeable emergencies that might arise.

This is closely linked with the requirement in the Regulations to identify working areas, which from the point of view of either radiation dose rate or potential levels of contamination, have to be designated as controlled areas or supervised areas.

The Regulations establish the following dose limits:

Employees: 20 mSv per calendar year (exception for special cases, where restricting exposure to 20 mSv impractical, to allow dose limit of 100msSv in 5 years with no more than 50 mSv in a single year).

Trainees: 6 mSv per year.

Women: Women of reproductive capacity should not exceed exposure to abdomen of 13 mSv in any three months.

Others: Non-employees should not be exposed to more then 1 mSv per calendar year.

Although these dose limits set an upper boundary on the occupational exposure of any worker the HSE requires that the principle of ALARP is followed in all circumstances and do not regard any procedure which exposes workers to unnecessary exposure to ionising radiation as acceptable. **Compliance with dose limits alone is not acceptable as evidence of satisfactory compliance with legislation.**

The worker also has responsibilities. Workers must obey the Local Rules for the Use of Ionising Radiation and comply with any warning signs of other safety instruction. Workers who are issued with film badges or other personal dosimetry equipment must follow the guidelines for use of the equipment given by the Approved Dosimetry Service at all times and report any problem with this equipment to the service as soon as possible.

Safety Reps have the right to be involved in consultations about radiological protection regimes, reviewing doses, investigating incidents and recommending further improvements.

16. *ELECTRICAL SAFETY*

Electricity properly used is a safe and efficient form of energy but improperly used it can be a source of danger. The main hazards of electricity are shock, burns, fire and explosion. However, even if the electrical shock a person accidentally receives is not in itself directly harmful, it can have disastrous consequences, eg while working at a height or up a ladder, a mild shock may well cause a fall to the ground; while the shock may not cause injury, the fall probably will. It is the duty of the employer to ensure that adequate precautions are taken for the exclusion of these hazards.

ELECTRICITY REGULATIONS

Electrical safety in all work places and/or work activities is specifically legislated for over and above the general duty of care owed by employers to their employees and members of the public under Sections 2 and 3 of the **Health and Safety at Work Act 1974** (HSW Act) respectively. This expansion of responsibility for electrical safety has been brought about by the **Electricity at Work Regulations 1989** which applies general health and safety principles rather than specific requirements. As a consequence of this non-specific approach, detailed guidance on the points to be considered and what actions are necessary for compliance, has been published by the HSE in the form of a 'memorandum of guidance to the Regulations'.

The onus of these Regulations is very much on employers to assess the work activities which utilise electricity, or which may be affected by it, perhaps by virtue of being in the same vicinity, etc and to define all foreseeable risks associated with them. he criterion which should be considered is whether any work on or near electrical systems gives rise to danger and/or personal injury.

The provisions do not stop at merely preventing electric shock but also require the employer to have regard to all foreseeable risks. These should include the suitability, design, construction and installation of electrical systems for specific tasks, the possibility of adverse, including environmental, effects and necessary precautions due to the siting of such systems, and the provision of suitable and adequate protection/precautions.

The employer should ensure that live parts are inaccessible and that protection against fault current is provided by such means as earthing devices or, in the case of portable tools, that reduced voltage systems with all insulated or double insulated tools are used. Where electrical equipment forming part of a system has to be worked on, eg during maintenance, it is vital that a 'permit to work' system is in operation and supervised by a person with sufficient training and competence to ensure that the equipment being worked upon is dead. This means that it must be not only switched off but totally isolated and locked off from any other part of the system by which it can become, inadvertently, live. Before work commences the equipment should be tested with an approved device to 'prove dead'.

The Provision and Use of Work Equipment Regulations 1998 and the **Personal Protective Equipment Regulations** are also relevant to electrical equipment and people who work with electricity.

In addition to these Regulations, non-statutory regulations commonly known as IEE Wiring Regulations are issued by the Institution of Electrical Engineers. These Regulations are an excellent source of information for the installation, inspection, testing and maintenance of electrical installations in buildings and contain many clauses about earthing, such as the provision of earth terminals and earth continuity conductors, the earthing of such metal work as cable sheath conduit and trunking and the earthing of exposed metalwork of plant and apparatus.

The **Low Voltage Electrical Equipment (Safety) Regulations 1989** implement Council Directive 73/23/EEC on the harmonisation of the laws of Member States relating to electrical equipment designed for use within the following voltage ranges: alternating current 50 volts to 1,000 volts and direct current 75 volts to 1500 volts. The Regulations, apply to all electrical equipment for use with the given voltages, except as excluded by Schedule 1, and require such equipment to be safe. The provision of these Regulations are deemed to be satisfied if the equipment bears a recognised standard mark, certificate or other acceptable authorisation.

Supply of unsafe equipment or components is prohibited.

PREVENTING ELECTRIC SHOCK

Properly designed electrical equipment in good order is safe. When it is damaged or poorly maintained, it can be lethal even at 240 volts. Hand held lamps and portable tools are particularly vulnerable. Frayed or damaged connecting cable should be replaced without delay and if tools or lamps have become damaged they should be sent for repair at once. The use of reduced voltage equipment, eg 110 volt system with the centre point earthed will reduce the hazard of serious electric shock and is to be recommended.

If reduced voltage equipment is not in use, as is usually the case in offices, one of the best means of protection is the use of some form of earth leakage circuit breaker. Unlike a fuse, which is designed to protect equipment, not people, in the event of an earth fault such a breaker will switch off the current so quickly that there should be no danger of injury.

If neither reduced voltages nor earth leakage breakers are in use, wherever possible, miniature automatic circuit breakers or cartridge fuse holders should be used. The use of rewireable fuse holders should be avoided if possible because of the danger of them being rewired with the incorrect size of fuse.

The chances of electric shock will be greatly reduced by a competent person carrying out the following checks:

- at least a weekly test of the continuity of the earth conductor between metal-clad portable tools and plug - this will ensure that the conductors in the earth wire remain adequate to effectively carry sufficient fault current to blow the fuse; in addition, the insulation resistance of both tool and flexible lead should be checked;
- at least a weekly inspection of fuse boards;
- a quarterly test of miniature automatic circuit breakers;

- a weekly inspection of rubber gloves, insulated mats, sheets etc used for electrical purposes;
- a six-monthly test of electrical rubber gloves;
- replacement of metal-clad tools in favour of suitable all insulated tools and appliances where practicable;
- routine inspection of the electrical installations;
- regular tests and inspections of all office equipment; and
- regular tests on all wall sockets.

A simple method to ensure that the routine maintenance and inspection of electrical equipment takes place, would be to label and date all equipment at the time it is inspected. If the date on the label shows that the equipment has not been inspected within the appropriate time span, the equipment is taken out of service until it is checked.

As well as inspecting and testing equipment to be used, thought should also be given to the positioning of sockets and to the amount and type of equipment plugged into them. Too often, especially in offices, sockets are either in an inappropriate position, causing wires to be trailing about the room, or there are too many appliances using too few sockets. In this latter case there is the risk of fire to be added to the risk of shock.

ELECTRIC WELDING

Arc welding utilises electricity which may be ac or dc. Given similar conditions and circumstances, dc welding is safer than ac and is to be preferred in confined and awkward places. With ac welding the workpiece should be earthed and this must be the only earth to the welding circuit.

All insulated electrode holders attached to the welding lead by plug and socket are recommended. The return lead should be clamped to the workpiece. The return lead should be clamped to the workpiece. The return lead is necessary in order to control the path of the current returning from the job to the transformer. Without it, the current, which is of the order of at least 80 amps, may take a random path through structural steelwork, railway lines, pipes etc, which could include high resistances (say, a loosely bolted connection) resulting in the generation of heat and the possibility of fire.

The welding circuit should be earthed at the job. If the earth was at the transformer winding and a break occurred in the return lead, the path of the return current would be uncontrolled. Therefore, it is very important that adequate earths must be available to the welder at each workplace. Alternating current welding sets can be fitted with a device that presents the voltage at the electrode holder rising above 50 volts during the period when no arc is being struck. Without this the voltage can rise to levels that would be dangerous to the operator.

BATTERY ROOMS

In work which uses dc current, either for tools or emergency lighting, there will probably be a battery room where batteries are being charged. Batteries give off

hydrogen when being charged and this can form an explosive mixture when mixed with air. Ventilation of battery rooms must be such that no concentration occurs. Since hydrogen is lighter than air, ventilation holes or ducts should be flush with the ceiling and precautions should be taken against the collection of pockets of hydrogen. (BS 6133 gives further guidance).

Forced ventilation may be necessary. However, ordinary electric fan motors may produce sparks and would create a hazard in an explosive atmosphere. Where necessary, expert advice should be sought before such ventilation is provided.

Electrical fittings in battery charging areas should be acid resistant and not fixed to the ceiling but to the walls about six feet or so above the floor, to ensure that they are well below likely concentrations of hydrogen, assuming that ventilation is adequate.

Smoking or the use of naked flames must be prohibited in battery rooms, and where any work is being undertaken which is likely to involve a source of ignition, it should be done under the direct supervision of a competent person. This also applies to the use of hand held lamps and tools which are not intrinsically safe. Suitable insulated tools for batteries will be available and should be used.

Finally, lead/acid type batteries contain sulphuric acid which is a hazard in itself and minimum precautions are the wearing of eye protection and the use of suitable gloves. Eye baths and a suitable supply of sterile water or saline solution should also be immediately available.

FIRST AID AND RESCUE

Before attempting first aid the current should be switched off. When the current has been switched off, commence artificial respiration immediately, and persist in trying to restore natural breathing until qualified help arrives. Lives have been needlessly lost by not starting artificial respiration soon enough and stopping it too soon.

If there is no one available who knows where to switch off the current, it is possible to free the victim from contact with the electricity at normal voltage met with in the place of work, ie 415/240, by using rubber gloves or a rubber mat. If these are not available, use a loop or rope or coat or cap to drag the person free. Avoid skin contact between yourself and the injured person. Whatever is used must be dry and non-conducting.

If it known or suspected that the victim is in contact with live conductors much above 415v, it is particularly dangerous to attempt to free that person unless a suitable article insulated from the system is available or until you are sure that the current has been switched off.

Posters about treatment of persons suffering from electric shock are available from the Health and Safety Executive directly or from booksellers. First Aid Organisations also publish very useful and lucid posters which cover gassing, drowning and suffocation as well as electric shock.

17. *NOISE*

Noise is one of the most widespread and underestimated workplace hazards. The HSE estimates that 170,000 people in the UK suffer hearing damage due to exposure to excessive noise at work.

There are two aspects of noise which are especially important in understanding noise hazards. These are frequency (or 'pitch') and intensity.

Frequency describes the rate of fluctuation of air particles produced by a noise source. This is measured in units of cycles per second called 'hertz' (Hz). The range of sound audible to the human ear lies roughly between about 20 and 16,000Hz, although it varies considerably between individuals and is affected by natural processes such as ageing, disease and past exposure to noise.

The **intensity** of sound provides a measure of the amount of energy that vibrating air particles deliver to the ears. The amount of sound energy can vary enormously. Painful sound is about 10 million-million times as intense as the quietest sound that can be heard. A scale based on this vast magnitude would be impossible to handle. To make it manageable, a special mathematical technique is employed to produce a scale for measuring sound intensity in units called decibels (dB).

A small increase in the decibel scale corresponds to a large increase in intensity. This is very important in understanding the significance of noise measurements. If the sound level increases by 10dB then the sound intensity, that is the amount of sound energy being transmitted to the ear, increases by ten times.

Similarly just as an increase of 10dB is an increase of ten times in intensity, an increase of 3dB corresponds to a doubling of intensity. Thus 83dB is not 'just over' 80dB, but is in fact twice as intense and is capable of producing correspondingly more damage to hearing.

Ordinary speech covers a range of frequencies from about 500Hz to 4,000Hz. Letters like 's', 't' and 'f' would be at the top end of this range, while letters like 'o' and 'a' would be nearer the bottom end. If your hearing is damaged through extensive exposure to noise at work, you probably will not hear the higher frequency vocal sounds around 4,000Hz. Speech becomes distorted as occupational deafness sets in.

When noise is measured at work, emphasis is normally given to the frequencies which have most effect on the human ear. This is done by adjusting the noise meter to take more notice of these frequencies. The scale used is called the 'A weighted decibel scale' or dB(A). Most noise meters and survey reports will be based on the dB(A) scale which works on the same rules as the ordinary dB scale.

Some noises are outside the frequency range of normal human hearing - like a dog whistle. The two types of noise which can't be heard are:

- **Infrasound:** a frequency below the ability of the human ear to pick up. It can cause a wide range of symptoms including headaches, nausea, giddiness, and

stomach disorders. Infrasound is common around heavy machinery and lorry cabs.

- **Ultrasound:** a frequency above the human ability to hear. It can cause similar symptoms to infrasound and may be produced by jet engines, dentists' drills and some electronic equipment.

What is hearing?

To understand why exposure to hazardous noise levels can lead to deafness it is necessary to understand the nature of hearing. We hear sound because pressure vibrations in the air set the ear drum vibrating. Behind the ear drum are three tiny bones which transmit vibrations from the ear drum to a flexible oval window which is situated at the end of the cochlea, which is full of fluid. Within the cochlea the movements of the fluid are picked up by thousands of tiny hair cells which in turn transmit impulses along the auditory nerve to the brain and this creates the sensation we interpret as sound.

Although the ear is sensitive to an amazingly wide range of sound pressures, the tiny hair cells in the cochlea can only take so much energy. Under normal conditions they should last for a lifetime although they are subject to deterioration due to ageing. Excessive exposure to dangerous levels of occupational noise wears out the tiny hair cells before their time.

TYPES OF HEARING LOSS

There are two main kinds of hearing loss. The first is called conductive hearing loss and is associated with problems in the outer or middle ear. The earhole may be filled with wax, an infection in the middle ear might fill it with liquid and make it swell, or middle ear disease may have led to permanent damage. Alternatively, damage to the drum or the bones of the middle ear may have been caused by an explosion or a bang on the head.

The second kind of hearing loss is damage to the hair cells and nerves of the inner ear which convert vibrations, transmitted from the ear drum via the ossicles and turn them into nerve messages for the brain. This kind of hearing loss is referred to as sensorineural hearing loss. It can be caused by disease and infection but nearly all noise induced deafness is of this kind.

OCCUPATIONAL DEAFNESS

For noise that is above 80dB(A) and is continuous, the sound energy transmitted to the hair cells of the inner ear is so great that they adapt by raising their threshold of response, shifting their field of sensitivity upwards and no longer responding to very soft sounds. This phenomenon is known as temporary threshold shift and its extent depends on the intensity of noise, its duration, and to some extent on its frequency composition. Temporary hearing loss is most noticeable when starting on a noisy job. Recovery from temporary hearing loss usually takes a few hours or at most a couple of days if the noise exposure has been severe. On the other hand, where those exposed to noise are never away from work for more than two days temporary hearing loss, in effect, becomes permanent hearing loss.

People working in conditions noisy enough to induce temporary hearing loss can expect a permanent loss to the same degree after about ten year's exposure to these conditions. Loud continuous noise rarely hurts the ear drum of the little bones of the middle ear; but it damages the sensitive hair cells in the inner ear. This damage is irreversible and the cells cannot be replaced.

Noise not only damages hearing sensitivity but can also give rise to **tinnitus,** a disturbing 'ringing in the ear'. This usually persists all the time and is especially worrisome at night when it can prevent sleep.

Recent research explains tinnitus as the exaggerated reverberation of the hair cells' response to sound; it is actually the echo of our own hearing mechanism. In people with normal hearing it will get drowned out, but as deafness sets in the echo becomes tormenting.

Hearing loss caused by noise exposure is often accompanied by an accelerated growth of loudness, called recruitment**.** Noises get louder suddenly. The person with noise-damaged hearing has to ask people to speak up and then, when they do, has to tell them not to shout. Recruitment also distorts common sounds.

Even a slight impairment of hearing may result in a significant and irreversible reduction in the quality of life. Hearing loss cuts its victim off from other people: social interaction becomes more and more of a strain; family life becomes difficult. It means having to turn up the television or having to drop out of a conversation in the pub. Hearing aids often simply bring all the background sounds crashing in making discrimination even more difficult. Auditory rehabilitation is advancing, and hearing aids are getting smaller and more sophisticated. Rehabilitation is costly and available only to the few.

Besides causing temporary or permanent hearing loss, noise can also be a safety hazard. Most obviously, noise interferes with verbal communication leading to errors and failures to respond to warning sounds and shouts. This is, of course, made worse where individuals have got used to noise as a result of temporary or permanent hearing loss. Such deafness can not only affect workplace safety but may affect the safety of the individual outside the workplace.

High noise levels also produce stress, by triggering bodily reactions which were laid down in evolution as 'fight or flight' responses, designed to prepare the body to deal with crisis situations. Such stress can contribute to circulatory problems, digestive problems, psychological disturbances and symptoms such as nervousness or sleeplessness.

Noise also affects work performance, particularly delicate tasks requiring concentration. This in turn can further contribute to stress and to errors which, in certain circumstances, may have safety implications.

MEASURING NOISE

Noise can be measured by a range of instruments. The chief instrument is the electronic sound meter, consisting of a microphone which translates fluctuations in

sound into fluctuating electric current. This current is then amplified and rectified and fed into a voltmeter calibrated either in dB or dB(A). The current produced is thus used as a measurement of sound intensity and measurements are averaged over a standard time period - either one second or one-tenth of a second.
Noise level meters must be calibrated regularly. Failure to calibrate may lead to dangerously inaccurate measurements being taken. If Safety Reps wish to take measurements themselves, they need to read the instructions carefully to ensure that they do not make mistakes, such as using the meter with flat batteries or recording not the external noise but the internal electrical noise of an overloaded instrument.

To examine the frequency characteristics of noise, octave band analysers can also be used. These consist of an ordinary sound meter fitted with a series of electronic filters so that readings can be obtained for sound levels at different frequencies. This information can either be plotted by hand, or fed into a computer so that results can be displayed visually.

Because sound levels tend to fluctuate over time, a method has been devised to produce an average value by approximating the fluctuations according to their level of duration. These values are expressed as continuous equivalent sound levels and are usually represented in units of dB(A) Leq. Instruments capable of measuring Leq store the information they receive about sound levels and express values that correspond to the sound history they have measured over a given time period. An attractive feature of this is that it corresponds fairly closely to the total dose of energy which has been transmitted to the ear during any period. For this reason standards of exposure to noise are most usefully expressed in terms of Leq.

METHODS OF NOISE CONTROL

Noise control is essentially about getting rid of noise by preventing its emission in the first place, or reducing the damaging effects of what remains. Successful noise control is impossible without a noise survey which measures and identifies the sources of the noise. Once the noise problem is identified, action is needed to get rid of it, but this may be difficult because those at risk do not recognise the problem or employers think that noise control is either impossible or too costly.

PERSONAL PROTECTION

Personal protective equipment (PPE) should be a last resort. Risk assessments made under the Management Regs will also identify and enable means of reducing risks to an acceptable level. Regulation 5 of the PPE Regulations requires that hearing protectors are compatible with other protective equipment used at the same time.

The main aim of any noise control programme must be the control of workplace noise. Where personal hearing protection is used it is important to understand some of the problems and pitfalls that may be encountered.

If ear muffs are used as a temporary measure then steps must be taken to identify and clearly indicate the ‘danger’ areas where they should be worn. This must be the

first step in a programme to eliminate noisy areas. A hearing 'conservation' programme which places overall emphasis on disciplining the workforce to wear hearing protectors, rather than eliminating or controlling noise at source is badly planned, inefficient and not in compliance with the Control of Noise at Work Regulations 2005.

LEGAL REQUIREMENTS

The Control of Noise at Work Regulations 2005

The Control of Noise at Work Regulations 2005 (the Regulations) requires employers to prevent or reduce risks to health and safety of their employees from exposure to noise at work. Below is a summary of the main provisions of the Regulations.

Action levels and limit values (Regulation 4)

The Regulations place requirements on employers to take certain actions when the noise exposure of employees is likely to reach or exceed specific action values. The action values are based on average noise exposure over a working day or week and on the maximum noise (peak sound pressure) to which an employee is exposed in a working day.

The lower exposure action values are 80 dB (A weighted) for average daily or weekly exposure and 135 dB (C weighted) for peak sound pressure.

The upper exposure action values are 85 dBA for average daily or weekly exposure and 137 dB for peak sound pressure.

There are also levels of noise exposure which the employer must ensure are never exceeded; these are 87 dBA for average daily or weekly exposure and 140 dB for peak sound pressure. (Reduction of noise from hearing protection should be taken into consideration when assessing likelihood of the limits being exceeded.)

Assessment of the risk to health and safety created by exposure to noise at the workplace (Regulation 5)

Where any employee is liable to be exposed to noise at or above the lower exposure action value the employer is required to carry out a suitable and sufficient risk assessment. This risk assessment must identify the measures required to comply with the Regulations.

The Regulations identify the means by which the assessment should be carried out and the factors that should be considered. The risk assessment should be reviewed regularly and immediately if there are significant changes in the work to which the assessment relates. HSE Guidance recommends that a noise assessment is carried out by a competent person at least every 2 years.

Employees or their representatives must be consulted on the assessment. The assessment and the measures the employer is required to take must be recorded.

Elimination or Control (Regulation 6)

The employer must ensure that risk from exposure to noise is either eliminated at source or, where this is not reasonably practicable, reduced to a level which is as low as is reasonably practicable. If an employee is likely to be exposed to noise at or above the upper action value the employer must reduce exposure by measures other than just providing hearing protectors, for example; by changing working methods, selection of less noisy equipment, design and layout of workplaces, appropriate maintenance, changing work schedules to reduce exposure and provision of information and training to ensure equipment is used correctly.

An employer must ensure that employees are not exposed to noise above an exposure limit value (ie 87 dBA daily/weekly average or 140 dB peak sound pressure). If a limit is exceeded an employer must take immediate remedial action to reduce noise exposure.

Employees or their representatives must be consulted on measures taken to control or to eliminate noise.

Hearing Protection and Hearing Protection Zones (Regulation 7)

Where work is carried out that is likely to expose any employee to noise at or above a lower exposure action value the employer must make personal hearing protectors available upon request to any employee who is so exposed.

Where an employer is unable to reduce exposure to below an upper exposure value the employer must provide personal hearing protectors.

An area where employees are likely to be exposed to noise at or above an upper exposure action value shall be designated a 'Hearing Protection Zone'. Hearing Protection Zones should be marked with a sign (in compliance with the Health and Safety (Safety Signs) Regulations) and have restricted access. Employers should ensure that all employees entering a Hearing Protection Zone wear hearing protectors. Selection of hearing protectors should be in consultation with employees or their representatives.

Maintenance and use of equipment (Regulation 8)

Employers must ensure that all equipment provided in compliance with these regulations is used and have a duty to maintain all equipment, including hearing protectors, used for noise control or protection.
Employees have a duty to make full and proper use of hearing protectors and other control measures and to report any defect to their employer.

Health Surveillance (Regulation 9)

If the risk assessment indicates that there is a risk to an employee's hearing the employee should be placed under health surveillance which shall include hearing testing. Employees should be given access to their personal health records. If there is damage to hearing the employer should refer the employee to a doctor or

specialist and review the risk assessment and measures taken to control or eliminate risk. Consideration should be given to finding alternative work where there is no further risk from noise exposure and health surveillance should be continued. Employees are required to present themselves for health surveillance, as required by their employer, during normal working hours and the costs must be met by the employer.

Information, instruction and training (Regulation 10)

Suitable and sufficient information, instruction and training must be provided to all employees who are likely to be exposed to noise at or above a lower exposure action value. This should cover the nature of the risks and findings of the risk assessment as well as information on noise levels and health surveillance.

FURTHER INFORMATION AND GUIDANCE

HSE's website provides guidance and advice on Noise and a free guidance booklet, 'Noise at Work – Guidance for employers on The Control of Noise at Work Regulations 2005' can be downloaded: http://www.hse.gov.uk/noise.

ACTION FOR SAFETY REPS

If a member has been diagnosed with noise induced hearing loss or tinnitus he/she may be entitled to compensation. Please advise the member to complete an EIS Accident Claim Form (available from Local Associations, Area Offices or the Employment Relations Department in Headquarters).

18. *MANUAL HANDLING AND OTHER PHYSICAL HAZARDS*

Manual jobs can damage the body. Vibration from tools or equipment can cause back damage, damage to joints, knees and elbows, shoulders and wrists as well as 'white finger'. Manual handling of loads can cause back damage, hernias, trapped nerves and other injuries. Repetitive manual work can cause tenosynovitis, tennis elbow or frozen shoulder. Too much standing or badly designed seating can lead to spinal damage, varicose veins or circulation problems. Working with arms outstretched or operating heavy foot controls can lead to muscle pain and tendon damage.

WORK POSTURE

Uncomfortable work posture can cause a range of problems: varicose veins; piles; back-damage and aggravation of work-related upper limb disorders.

The main causes of such problems are badly-designed seating; having to stand or sit for too long; reaching too far and inadequate lighting. Because many people get used to bad work posture, it can become a major source of problems. Few jobs have been specifically designed to ensure a comfortable work posture. Workers are therefore at risk in office work, light assembly work, packing, and check-out operation.

Continuous standing should be avoided wherever possible. The Workplace Regulations, ACoP and Guidance give information on suitable seating and design of work stations. Where jobs are done standing, workers should be able to have their upper arms at their sides, without excessive bending or twisting of the back.

Where work has to be done standing, foot rests can help reduce the strain on the back and enable workers to change positions. Resilient floor covering or duckboards can help reduce the strain on joints. Seats or stools enable posture to be varied.

Some jobs have to be done standing up, provided of course no heavy lifting is required. Work station design and layout are very important. The bench or desk and seat need to be considered as one unit. The seat should fit the worker and the work surface and work layout should fit the worker when seated.

MANUAL HANDLING

About a quarter of all accidents notified to the HSE every year are connected with the manual handling of loads.

Damage to the back or spinal column can make any sort of bodily activity impossible or extremely painful. Back injuries can rarely be seen. They are often slow to heal and once damage has been done they often recur. Manual handling also causes sprains and strains of other parts of the body and can lead to other sorts of accidents: for example, when carrying dangerous substances or losing control of heavy loads which may be in situations where others may also be at risk.

MANUAL HANDLING CHECKLIST

Posture or Movement

Does work involve:

- frequent or prolonged stooping?
- stretching or reaching above shoulder height?
- sideways twisting of the body?
- unbalanced or uneven carrying of loads (for example, one handed carrying)?
- sitting in uncomfortable position with back unsupported?

Loads

When the load is inanimate:

- is the weight of loads clearly marked?
- can loads be made smaller and lighter?
- are loads securely packed, so contents won't shift or spill?
- do loads contain dangerous substances?

Lifting People

When the load is a person:

- are lifting and handling needs included in patient/client care plans?
- are staff warned about particular handling problems relating to the client's needs?
- are patients/clients given training so they can assist as much as possible?
- are staff expected to lift people alone?
- is there an agreed procedure in case of patient/client falls?

Working Environment

- Does lack of space/poor layout cause problems?
- Is there enough space to move freely and change posture?
- Is there sufficient space to use mechanical equipment when needed?
- Are floors clean, even, slip resistant and free from obstructions?
- Is workplace temperature too hot or cold?
- Is lighting adequate (not too dim or glaring)?
- Could hoists, lifts or ramps be installed?
- Are heavy items stored at a convenient height (to avoid stooping or reaching)?
- Are work surfaces at a comfortable height or adjustable?
- Do work surfaces allow a convenient arrangement of equipment on them (to avoid twisting or stretching)?

Individual Capability

- Does the job require unusual strength or height?
- Does the job create a hazard for those who are pregnant or have a health problem?

Furniture and Equipment

- Are workstations and equipment adjustable to suit the user?
- Are staff trained and encouraged to adjust furniture and equipment before use?
- Are furniture and equipment checked and maintained regularly?
- Are faulty equipment and furniture taken out of service and replaced?
- Are staff trained and encouraged to use mechanical equipment to reduce physical strain?

Methods of Work

- Can work be changed to make it safer?
- Can mechanical equipment be used - for example trolleys, hoists, lifts?
- Are there sufficient rest breaks to allow staff to recover from physically demanding work?
- Are there enough trained and experienced staff to cope at all times including absence cover, night and weekend working?
- Can work routines be changed to spread physically demanding work more evenly between staff and shifts?

Training

- Are staff, supervisors and managers trained in prevention of back pain?
- Does training include use of mechanical and adjustable equipment and furniture?
- Are staff retrained when new equipment or work methods are introduced?
- Is the training relevant to the needs of the occupational group to whom it is being provided?
- Are training courses monitored for effectiveness?

Clothing and Equipment

- Do uniforms, protective equipment and other clothing provided allow easy movement?
- Is appropriate non-slip footwear provided where needed?

Accident Reporting

- Is there a system for reporting and monitoring accidents, near misses, injuries and ill health?
- Are incidents investigated and action taken to prevent them happening again?

THE MANUAL HANDLING REGULATIONS 1992

“Manual handling operations” means physically lifting, carrying or moving any load. The Regulations apply wherever manual handling operations are carried out and place duties on employers, self-employed workers and employees. There are no maximum weights limits set for loads. Instead, the Regulations require a risk assessment of the task, load and working environment.

Duties on **employers**:

- avoid hazardous manual handling operations so far as is reasonably practicable, by redesigning the task to avoid moving the load or by automating or mechanising the process;
- make a risk assessment for any hazardous manual handling operations that cannot be avoided;
- reduce the risk of injury as low as reasonably practicable: particular consideration should be given to the provision of mechanical assistance but where this is not reasonably practicable, other improvements to the task, the load and the work environment should be explored;
- review risk assessments if there is reason to suspect they are no longer valid, or if there has been any significant change in the operations; and
- provide training and information for employees, and specific information about the load.

Duties on employees:

- make full and proper use of any system of work provided for employees by their employer to reduce risks of manual handling injuries.

Solving Manual handling problems

Once manual handling risks in the workplace have been identified the employer should be urged to solve the problem. There are three broad approaches to reducing the hazards of manual handling.

- **elimination -** change to mechanical handling;
- **modification -** change the way manual handling work is organised or reduce its scale; and
- **adaptation -** match the workers to the task, by relying on selection and training.

The solution to manual handling problems at the workplace often involves a mixture of all three. But tackling manual handling problems is rarely a one off exercise. It requires a sustained campaign with short, medium and long-term objectives.

The best answer is to get rid of manual handling altogether - particularly high risk tasks. In many cases this might not be possible straightaway, but it should not be assumed that lifting and carrying loads is an inevitable feature of work systems.

For example:

- can lifting and carrying be avoided - for example, by using trolleys or conveyor systems?
- can the layout of the job be altered to remove the need for items to be carried from one place to another? and
- can good design get rid of awkward handling tasks?

There usually is scope for improving manual handling operations, but often the best chance of change lies in introducing new machines, processes or systems.

Safety Reps have a right to information about new processes, including proposed workplace layouts and by being involved at the design stage they have the chance to get rid of problems before a new machine, process or work system is installed.

Matching the job to the worker

If manual handling cannot be eliminated then the main aim should be to cut the weight of loads and to see that they are handled less often. Jobs and risk assessments should be reviewed to check that the health and safety of workers is not threatened by the loads they are lifting, carrying or moving about.

There may be a few tasks which cannot be altered and which involve difficult lifting problems. In these cases, the workers who are required to do them should be physically suited and specially trained.

The relevant factors to be considered in matching the job to the worker include their personal characteristics, their degree of skill and experience, the nature of their task, working conditions and the pace of work.

REPETITIVE WORK

Repetitive work involving hands, arms, or legs can cause work related upper limb disorders (WRULDs). These are injuries to the joints, muscles, nerves and tendons, caused by physical overload from repeated use, repeated pressure being applied and the maintenance of a rigid posture. Repetitive strain injuries (RSI) can result in pain, fatigue, and crippling disability. They are much more widespread than is generally recognised and are frequently misdiagnosed.

Part of the problem in identifying whether the symptoms outlined above are those of WRULDs is that the same symptoms occur in muscle and tendon diseases which are not caused by repetition.

Most cases of WRULDS are difficult to treat. If they are caught in the early stages, when symptoms only appear towards the end of a shift, it may be possible to take action to prevent further damage - for example by getting rid of risk factors in the job, reducing the work rate, moving to other work, (or alternating with non-repetitive tasks) or increasing the number of breaks.

In bad cases, surgery to treat carpal tunnel syndrome or tenosynovitis is sometimes recommended, but the results are frequently poor and do not allow the worker to return to repetitive work. When symptoms become acute, the only answer is to secure time off work until they have abated or to arrange transfer to alternative work - without loss of pay.

As well as the employer's general duties under the Health and Safety At Work Act there are a number of Regulations which can be useful in negotiating improvements:

- the Management Regulations require employers to assess risks including those of upper limb disorders. Employers have to plan, organise and implement health protection measures. WRULDs risks are no exception and should always be examined when new work practices and layouts are being planned so that any problems can be controlled.
- the Workplace Health, Safety and Welfare Regulations give details about the provisions for workplaces. They cover lighting, temperature, ventilation, floors, facilities for rest and suitability of work stations.
- the Display Screen Equipment Regulations cover keyboard work at screens and place five requirements on employers:

  - to assess and reduce risks;
  - to provide breaks and changes of activity;
  - to provide training and information;
  - to provide eye tests where these are appropriate; and
  - ensure work stations meet minimum ergonomic requirements;

- the Provision and Use of Work Equipment Regulations cover design of machinery to facilitate its handling, control systems and devices, guarding, information and instruction; and

the Manual Handling Regulations require risk assessments to be carried out on jobs that involve heavy or bulky loads, or any pushing, pulling, putting down, carrying or moving of loads.

The key to preventing WRULDs is making sure that jobs are fitted to the worker (and not the other way round) and that as far as possible certain hazardous features are designed out of manual work tasks. These include:

- forceful use of muscles in a repetitive way - eg using a hand screwdriver all day;
- using muscles at great speed for prolonged periods-eg keyboard operation; or
- working at the limit of the range of movement or reach.

Modifying job design to overcome these problems can be approached in a number of ways:

- reducing work rate;
- reducing repetition;
- bending controls and tools rather than the wrist; redesigning hand grips or controls;
- allowing arms to be kept low and elbows close to the body; and
- avoiding static work.

(Chapter 22, Display Screen Equipment also covers WRULDs)

If a member has suffered a WRULD she/he should consider claiming for compensation. The first stage of this process is to complete an EIS Accident Claim Form, available from Local Associations, Area Offices or from the Employment Relations Department at Head Quarters.

19. *PERSONAL PROTECTIVE EQUIPMENT (PPE)*

To work safely and in comfort, many workers need PPE to create a barrier between the worker and hazard. Even the best designed clothing and equipment is only a last line of defence and will not eliminate hazards, so controlling them at source is always preferable. When PPE must be used, it must be the right type for the job, must fit properly and be regularly maintained.

The Personal Protective Equipment at Work Regulations 1992 require risk assessments before selecting the PPE: an employer or self-employed person must ensure that one has been made to ascertain whether the proposed PPE is suitable (Regulation 6). The assessment need not be duplicated to meet the requirements of the Management Regulations. Except in the most simple and obvious of cases, the significant findings of an assessment should be recorded and readily accessible. It must be reviewed if there is reason to suspect that it is no longer valid.

Employees should be involved in the selection of PPE, and should have an informed choice where possible. Selection should be made with the individual in mind: for example, a worker who requires spectacles with prescription lenses will be unable to work wearing non-prescription eye-shields. Masks can make seeing and talking difficult; hearing protectors prevent users hearing warning sirens; and workers wearing heavy equipment cannot move fast. If more than one type of protection must be worn, they should be designed to be worn together, but they are not always compatible: hard hats and safety glasses can get in the way of ear muffs; not all goggles will fit with half-face masks.

In selecting PPE, consider:

– risks to health or safety that have not been avoided by other methods;
– the sort of performance and characteristics that the PPE would need to have, for it to be effective; and
– comparison of the proposed PPE with the required performance and characteristics.

Where there is statutory requirement for PPE to be used, this should be indicated by use of safety signs.

The PPE Regulations include duties on employers, employees and self-employed workers.

Employers must:

– provide PPE to employees whenever risks are not adequately protected against by other means;
– select PPE suitable for the risk, for employees who will be using it and the working environment;
– assess the PPE available to ensure it is suitable;
– maintain the PPE in a clean and effective condition;
– provide suitable accommodation for PPE provided;

– ensure that the PP E provided is properly used; and
– provide information, training and instruction for employees.

All PPE provided under these or other Regulations **must be free of charge to employees.**

Employees must:

– use the PPE provided, in accordance with training and instruction given;
– report any loss or obvious defect in PPE; and
– take all reasonable steps to ensure that their PPE is returned to the accommodation provided after use.

Self-employed workers who are provided with PPE have similar duties to employees. Otherwise they must provide themselves with suitably assessed PPE, kept in a clean and properly maintained condition and stored in suitable accommodation when not in use.

The Regulations Step by Step

Regulation 1 - date and title

Regulation 2 - Definitions

“Personal protective equipment” means “all equipment (including clothing affording protection against the weather) which is introduced to be worn or held by a person at work and which protects him against one or more risks to his health and safety, and any addition or accessory designed to meet that objective”.

PPE includes protective clothing such as overalls, gloves, safety footwear, safety helmets, high visibility clothing. It also includes protective equipment such as safety goggles and visors, life-jackets, underwater breathing apparatus, safety harnesses. Exceptions are listed in Regulation 3.

Regulation 3 - Equipment not covered by these Regulations

(a) ordinary working clothes and uniforms which do not specifically protect the wearer, for example, workers' own clothes or uniforms. However, many uniforms also protect wearers from bad weather, chemicals, body fluids, or other hazards of the job and these uniforms and work clothes should not be excluded;
(b) offensive weapons used as self-defence or deterrent equipment: Guidance says that these Regulations *do not* require employers to provide equipment such as personal alarms, or truncheons for security staff. These Regulations *do* apply to protective equipment such as helmets, face visors or body armour - particularly relevant to emergency services, personnel and security guards;
(c) portable devices for detecting and signalling risks and nuisances, for example personal gas detectors or radiation dosimeters. However, under HASAWA, employers must provide these where necessary;

(d) personal protective equipment used for protection while travelling on a road, for example, motorcycle crash helmets and car seat belts are dealt with by specific traffic legislation. However, the PPE Regulations *do* apply to crash helmets worn at work elsewhere;
(e) equipment used during the playing of competitive sports. However, these Regulations do apply to PPE worn by sports instructors and lifeguards etc while at work; and
(f) when more specific Regulations require the provision or use of PPE - these more specific Regulations are:
    - Control of Lead at Work Regulations
    - Ionising Radiation Regulations
    - Control of Asbestos Regulations
    - Control of Substances Hazardous to Health Regulations
    - Noise at Work Regulations, and
    - Construction (Head Protection) Regulations.

These specific Regulations should be read alongside the PPE Regulations. A sensible approach is to apply the principles of assessing, selecting and maintaining suitable PPE and providing information and training for employees, to all situations where PPE is needed.

Application to non-employees

Under these Regulations, trainees and school children on work experience schemes have the same rights to protection and duties as employees.

Self-employed workers who are provided with PPE have similar duties to employees. Otherwise they must provide themselves with suitable, assessed PPE, kept in a clean and properly maintained state and stored in suitable accommodation when not in use.

Although these Regulations do not cover other non-employees such as visitors, students or school children while at school or college, HASAWA requires employers to protect the health and safety of non-employees. Employers are therefore advised to follow the requirements of these PPE Regulations, which could mean keeping a supply of suitable protective clothing available for visitors or providing PPE for students working with chemicals or machinery. Employers' risk-assessments must include consideration of risks to non-employees who may be affected by their work. Employers must also inform and co-ordinate health and safety arrangements with contractors working on their premises. These are requirements under the Management Regulations.

Regulation 4 - Provision of PPE

When health and safety risks cannot be adequately controlled by other means, employers must provide employees with suitable PPE.

PPE should be seen as a “last resort” not a quick or cheap method of controlling risks. There may be a better solution, for example, improving ventilation; changing

the way the job is done; or by improving guards on machinery. However, sometimes PPE will still be needed in addition to other improvements.

Any PPE provided must be “suitable”. The Regulations define suitable as:

(a) appropriate for the risks involved and the conditions at the place where exposure to the risk may occur - ordinary washing-up gloves will not protect against many solvents and strong disinfectants, so they are not “appropriate”. And lightweight PPE intended for occasional or home DIY may not be robust enough for working conditions. PPE used in catering areas must be easily cleaned to comply with food hygiene;
(b) takes account of ergonomic requirements and the state of health of the persons who use the PPE. It is not suitable if it is badly fitting, uncomfortable, puts a strain on wearers or makes the work unnecessarily difficult;
PPE must not endanger the health of wearers. Workers who suffer from heart or lung problems may not be able to use breathing apparatus as a normal part of their work. Some people are allergic to latex (natural rubber) so PPE made of other materials could be more suitable for them;
(c) fits the wearer correctly - to ensure this, employers may have to offer a range of types and sizes of PPE. Wearers should be involved in selection and fitting of PPE;
(d) so far as is practicable, it is effective to prevent or adequately control risks without adding new ones. Poorly chosen PPE can cause tripping hazards, get caught in machinery, slow movement, obscure vision etc. Dirty PPE can cause skin rashes and infections. Some PPE will inevitably cause problems, for example wearing ear muffs makes it difficult to hear warnings. This must be taken into account when assessing health and safety risks (see Regulation 6); and
(e) complies with relevant European standards. Under the PPE (Safety) Regulations 1992, personal protective equipment for work which passes specified tests will carry a “CE” mark. This shows that the PPE complies with required standards.

Regulation 5 - Compatibility of PPE

Employers must ensure that different sorts of PPE worn together are compatible. This may mean selecting specially designed equipment: safety helmets can be designed to be worn with visors or ear muffs. Risk assessments must consider the effectiveness and comfort of the combination of PPE that is used, and not just individual items of PPE.

Regulation 6 - Assessment of PPE

Where risks cannot be adequately controlled by other means, employers must, before choosing any PPE, assess:

(a) the risks to health and safety that need to be controlled; and
(b) what PPE would be "suitable" protection against those risks.

The assessment must be reviewed if:

(a) there is reason to suspect it is no longer valid; or
(b) there have been significant changes for example, of users, of risks or in working conditions.

All except the simplest assessments should be recorded in writing or on computer disc etc. Safety Reps have a right to copies of the assessment records. Check that all PPE has been included (including PPE used away from the employer's premises). Safety Reps and PPE users should be closely involved in the assessment and selection of PPE.

Regulation 7 - Maintenance and replacement of PPE

Employers must ensure that all PPE provided is:

- maintained;
- cleaned or replaced as appropriate;
- in efficient working order; and
- in good repair.

Employers will have to set up proper maintenance systems to examine, test, repair, replace, clean and disinfect PPE. Stocks of disposable PPE and replacement parts must be available when needed.

Special arrangements are needed for the storage, cleaning or disposal of infected or contaminated PPE.

Regulation 8 - Storage for PPE

Appropriate accommodation must be provided for PPE when it is not in use to protect PPE from contamination, dirt, loss or damage. Depending on the type of PPE and the workplace, the accommodation may be lockers, pegs, boxes etc.

Adequate PPE storage must be provided on vehicles when used by mobile workers who may also need to carry separate containers for contaminated or used disposable PPE.

The accommodation provided under the Workplace (Health, Safety and Welfare) Regulations 1992 for ordinary clothing should be separate from PPE.

Regulation 9 - Information, instruction and training

Employers must provide employees with information, instruction and training that is 'adequate and appropriate'. This must tell employees about:

- the risks which the PPE will avoid or limit;
- what the PPE is for;
- how to use the PPE provided; and
- any action needed by the wearer to maintain the PPE in clean and efficient repair.

This information and instruction must be "comprehensible" to all employees involved. Information full of technical terms may not meet this legal requirement. Information must be in language which employees understand (not always just in English).

Training in the use of PPE should include the following points:

(a) explanation of risks and why PPE is needed;
(b) operation, performance and limitations of PPE;
(c) instructions on selection, use and storage of PPE. Special procedures such as permits to work should be explained;
(d) factors affecting performance of PPE such as other PPE; poor fit; working conditions; defects; wear and tear; contamination;
(e) practice in putting on, wearing and removing PPE;
(f) practice and instruction in inspection and testing of PPE before use.,
(g) practice and instruction in any maintenance to be done by PPE user;
(h) recognising defects and arrangements for reporting loss or defects; and
(i) instruction in safe storage of equipment.

The Management of Health and Safety at Work Regulations require employers to provide adequate health and safety training when employees are recruited, when there have been significant changes and at appropriate intervals. Training must take place during working hours, so special arrangements may need to be made for part-time workers and those working unsocial hours.

Regulation 10 - Employees' duties to use PPE

Employers must “take all reasonable steps” to ensure that employees use properly the equipment provided. It is not enough just to make PPE available to staff.

Employees must use PPE provided in accordance with training and instructions provided. If employees have not received “adequate and appropriate” training, they are unlikely to be held responsible for not using PPE properly. But employees must not deliberately endanger themselves or others.

Employees are also required to "take all reasonable steps" to ensure that PPE is returned to the accommodation provided for it after use. Employees need not do this if it is agreed that they can take their PPE away from the workplace.

Regulation 11 - Reporting loss or defect

Employees must report to their employers, any loss of or obvious defect in PPE provided for them. There must be arrangements for reporting loss or defects and employees should be informed about these arrangements. This must include PPE used away from employers' premises.

This duty on employees does not reduce the duties on employers to make their own inspections and assessments. Employers cannot get out of their own responsibilities simply by claiming that faults were not reported to them.

EYE PROTECTION

Eye protection is covered by the PPE Regulations. Regulation 4(1) requires PPE provided to employees who may be exposed to a risk to their health or safety, to be suitable, which includes being appropriate to the risks and fitting the wearer correctly. This is particularly important for eye protection.

Prescription Safety Spectacles

There is a considerable demand by workers for the provision of prescription safety spectacles as eye protectors, and many employers already provide optically ground safety lenses for spectacle wearers. Care needs to be taken to ensure that such lenses are suitable for the type of work being undertaken and the level of risk involved.

RESPIRATORY PROTECTIVE EQUIPMENT (RPE)

There are a number of difficulties in using respirators and breathing apparatus, but the most important is ensuring that they really are safe. A further problem is the discomfort for those who have to work in this kind of equipment for any length of time. Respirators should only be used when the equipment is well fitting and designed for the particular job, and even then, only for short periods.

The PPE Regulations do not apply in full to most respiratory protective equipment because they are covered by other Regulations such as the Control of Substances Hazardous to Health Regulations.

20. *FIRE SAFETY*

FIRE SAFETY IN EDUCATIONAL ESTABLISHMENTS

The Fire (Scotland) Act 2005 (as amended) introduced changes to fire safety law and repealed previous fire safety legislation. The Act places a duty on employers, employees, managers, owners and others in relation to fire safety. The Act, together with the Fire Safety (Scotland) Regulations 2006, provides the legal framework for fire safety in Scotland and requires all employers to carry out a suitable fire safety risk assessment.

The Scottish Executive has produced guidance on 'Fire Safety in Educational Premises and in Premises Used for Day Care of Children' which provides recommendations on the fire risk assessment process, the reduction of risk and on fire safety measures that can be implemented to mitigate risks. Councils should ensure that they are following the guidance, or taking measures that are equally as effective, when carrying out fire risk assessments.

A fire risk assessment is required for all schools, colleges and universities. The aim of the legislation is to ensure the safety of all persons in the premises by setting our fire safety responsibilities. Fire risk assessment is required and risk assessments must ensure legislative requirements are met, reduce risk and put in place arrangements to ensure control and review the fire safety measures. Risk assessments must be recorded and kept under reviewed as necessary.

Safety Reps should contact the Fire Prevention Officers when they visit their workplace, although Fire Prevention Officers are not obliged to liaise with Safety Reps or make information available to them. Nevertheless they may respond to general enquiries from Safety Reps and to any complaints regarding infringements of fire safety standards. The Fire Prevention Officer can be contacted through the local fire service in most cases.

The Fire and Rescue Authority or Joint Fire and Rescue Board for the area is the enforcing authority for fire safety. Enforcement notices can be issued to require specific actions and, if there is imminent danger, a prohibition notice can be issued which could restrict the use of the premises. There are financial penalties for breaches of fire safety standards or laws in the courts, and if convicted in a higher court the potential for an unlimited fine and up to two years imprisonment or both exists.

HSE inspectors are responsible for the fire safety standards in certain high fire risk places of work and the control of the storage of certain flammable liquids. In addition, their general health and safety duties under HASAWA mean that they inspect and enforce general safety standards relating to fire hazards and risk.

FIRE RISK ASSESSMENT

Fire risk assessments must be completed by a competent person and information from them provided to employees.

Factors to be considered in a fire risk assessment:

- Identify fire hazards.
- Identify any staff and other people who are especially at risk.
- Remove/reduce fire hazards and provide additional fire safety measures if necessary.
- Record findings of the fire risk assessment and action points.
- Consider arrangements for people with disabilities.
- Prepare the emergency plan.
- Provide enough exits for everyone to get out in good time.
- Ensure that all escape routes and exits are available for use.
- Provide an appropriate means for giving warning in case of fire.
- Arrange the checking, testing and maintenance of fire safety equipment.
- Keep appropriate records.
- Ensure your staff are adequately informed and trained.
- Include fire safety in your health and safety policy for the workplace.

The stages of fire risk assessment

It may be useful for the assessment to be considered in the following stages:

Stage 1:
Identify any fire hazards (such as readily combustible materials, highly flammable substances, oxygen, and sources of ignition).

Stage 2:
Identify people at risk (staff, pupils, visitors and others) at risk.

Stage 3:
Evaluate the risk and decide if existing fire safety measures are adequate. Remove or reduce fire hazards and evaluate fire alarm system, fire-fighting equipment, escape routes and lighting, signs and notices, maintenance of equipment and systems, emergency plans and training and management.

Decide whether the existing fire safety arrangements are adequate or need improvement.

Stage 5:
Record significant findings and action taken/action to be taken.

Stage 6:
Keep fire risk assessment under review and revise where necessary.

MANAGING FIRE SAFETY

It is important that there is management commitment to fire safety and that a culture of fire safety is maintained. Managers should ensure that there is a fire safety policy, emergency fire action plan, fire safety and training, fire drill, maintenance of procedures, systems and equipment and recording of information.

FIRE INSTRUCTIONS AND FIRE DRILLS

Employers must ensure that their employees are familiar with the action to be taken in the event of fire and in most cases this will mean regular training and fire drills. The frequency of fire drills and training periods will normally be included in the fire risk assessment, and the following records should be kept:

(a) date and duration of the instruction or exercise;
(b) name of the person/s giving the instruction and taking part; and
(c) the nature of the instruction, training or drill.

Notices should be prominently displayed indicating the action to be taken on discovering a fire or hearing the alarm.

Instruction and training generally should provide for the following:

- the action to be taken upon discovering a fire;
- the action to be taken upon hearing the fire alarm;
- raising the alarm, including the location of alarm call points, internal fire alarm telephones and alarm indicator panels;
- the correct method of calling the fire brigade;
- the location and use of fire fighting equipment;
- knowledge of the escape routes;
- appreciation of the importance of fire doors and of the need to close all doors at the time of a fire and on hearing the fire alarm;
- stopping machines and processes and isolating power supplies where appropriate; and
- evacuation of the building.

Fire drills should be held at least once a year but preferably once a term. In some cases the drill should be unannounced. The person in charge of the drill and designated observers should make note of any inappropriate actions (eg collection of personal belongings), communication difficulties, problems with access routes and any difficulties experienced by people with disabilities. Following the drill remedial action should be taken to ensure problems are resolved.

Training should also cover use of fire extinguishers. Not all extinguishers are suitable for all types of fire (eg water should not be used on electrical fires or burning liquids), so training should include the correct choice and use of extinguishers.

Fire extinguishers all have a red body with a colour coded label/band for identification. The types of extinguishers are listed below:

Foam (cream label/band) - low expansion foam is suitable for flammable liquid fires, and high expansion foam is especially useful in inaccessible areas, eg cable tunnels and basements.

Carbon dioxide (black label/band) - suitable for hazardous plant, eg electrical equipment and computer areas. Power should be disconnected, if possible, prior to use.

Dry Powder (blue label/band) - suitable for flammable liquids, electrical equipment or situations where water damage must be kept to a minimum.

Water (red body) - suitable for Class A fires only, ie fires involving solid materials such as wood, paper or textiles.

It is important that extinguishers are fixed in position on brackets or shelves, with the handle of the extinguisher no more than 1.1m from the floor. They should be checked at least monthly and inspected by trained personnel yearly. The date of the service should be recorded on the extinguisher.

Fire Blankets should be used where there are containers of oil or fat and there is a potential for fire.

FIRE PROCEDURES AND THE DISABLED

Special consideration must be given to the needs of disabled staff in fire situations. Some aspects for consideration are:

- identification of everyone who may need special help to get out;
- allocation of responsibility to specific staff to help disabled staff in emergency situations;
- consideration of the best escape routes;
- developing procedures to enable lifts to be used where possible; and
- procedures for disabled persons to summon assistance in emergencies.

Note: Lifts should not be used as a means of escape in the event of a fire. If the power fails due to effects of fire the lift could stop between floors, trapping occupants in what may become a chimney for fire and smoke.

STORAGE OF FLAMMABLE MATERIALS

There are special requirements for storing flammable materials laid down in the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972. The basic standards apply other than to suitable small closed containers containing not more than 500 cc of highly flammable liquid and that all flammable liquids must be stored in suitable fixed storage tanks in safe positions; or in suitable closed containers:

- in a safe position in the open air (protected where necessary against direct sunlight); or
- in a storeroom which is in a safe position or is a fire-resisting structure (half-hour fire resistance); or
- in a workroom in a suitably placed cupboard or bin which is a fire-resisting structure (half-hour fire resistance), subject to a maximum quantity of 50 litres.

Storerooms should be adequately ventilated and should have means to contain any spillage, eg sills or drainage to a safe place. Storage of petroleum spirit and mixtures is controlled separately through a licensing system. The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972 also set standards for the storage of LPG. Generally the Regulations require that all LPG not in use must be stored:

(a) in suitable underground reservoirs or storage tanks in safe positions in the open air;
(b) in pipe-lines, pumps or other appliances forming part of a totally enclosed pipe-line system; or
(c) in suitable cylinders kept in safe positions in the open air, or where this is not reasonably practicable, in a storeroom constructed of non-combustible material.

Storerooms should be adequately vented and either be in a safe position or a fire resisting structure.

USE OF GAS HEATERS

Portable liquefied petroleum gas (LPG) heaters should only be used as temporary measures the event of breakdown of the normal heating system. Where they have to be used there is a need to recognise the fire, explosion and toxic risks. Circumstances have to be considered individually because conditions in individual premises vary enormously.

If heaters are to be used a risk assessment should be carried out and a written safe system of work should be prepared by a competent person. The employer should ensure that the arrangements detailed in the system of work have been properly implemented. The fire risk assessment (see above) will also require to be reviewed.

Since it is foreseeable that the need for emergency heating will arise from time to time, employers should make advance plans. If, after taking account of all possibilities, it is decided that the heating is to be of the portable LPG variety,
several factors should be taken into account. These include: the adequacy of the ventilation, the extent of usage of individual rooms, the existing fire hazard of the

building and separate rooms within it and the availability of suitable means of escape. Additional fire fighting equipment may also be required. Clear written guidance on emergency procedures should be prepared, eg, to cover the possibility of a leakage of gas with or without a fire, or a fire arising from extraneous sources.

Employers should buy equipment from reputable firms. Where equipment is hired it should only be hired from a reputable supplier who has adequate facilities to ensure proper maintenance. Equipment, whether purchased or hired, should conform to British/European Standards. The manufacturers or suppliers instructions should be taken into account and should be made available to the users of the equipment.

Several years may elapse between the need to use the LPG heaters and it is necessary to make suitable arrangements for the long term storage and maintenance of the equipment. Flame failure devices, atmosphere sensitive devices and gas pressure regulators can deteriorate and should be examined annually by a specialist engineer. The equipment should also be examined following a spell in storage prior to use.

In general appliances fuelled by butane rather than propane are preferred for indoor use as butane has a lower pressure. Large industrial mobile heaters, for example those fuelled by 47kg propane cylinders should not normally be used while premises are being occupied for educational purposes. Even when heaters designed for use with cylinders of no larger than 15kg capacity are used the possibility of students tampering with the equipment should be realised. Close supervision may be necessary.

STORAGE OF CYLINDERS

LPG cylinders (including empty ones) not connected to an appliance or heating appliance should be stored outside and where possible in a secure cage or compound. Cylinders should always be kept upright and protected from damage, eg by chaining unstable cylinders in racks or special trolleys. It is not essential to remove a cylinder from an appliance for short term storage purposes provided the valves on the appliance and on the cylinder has been turned off. One reason for this is because repeated making and breaking of connections may increase the possibility of a faulty connection being made.

KEEPING OF HEATERS IN ROOMS

Heaters should be brought into a room only when required for immediate use and should be removed when normal heating is restored.

The number of heaters per room, and where applicable, in fire separated sections of the premises, should be kept to a minimum.
Each heater brought into a room for use in an emergency should:

(a) be located so as not to affect the means of escape (eg it should be placed away from room exits and not in corridors or circulation spaces forming part of the means of escape) and should not be exposed to draughts;

(b) be placed in its allocated position with at least one metre clear space around it except that the heater may be placed adjacent to a wall provided the hot surface faces away from the wall and there are no curtains or other combustible materials within the metre space.

Special consideration may need to be given to the location of heaters in laboratories, art rooms, or workrooms where highly flammable materials may be used and where a safe location cannot be identified an LPG heater should not be used.

There should be clear instructions that when a suitable location has been identified the heater should not be moved without the authorisation of a competent person. It may be useful to provide a sketch for use by the fire brigade showing the locations of the LPG heaters in each building.

TOXIC RISKS AND VENTILATION REQUIREMENTS

The use of LPG heaters has resulted in some complaints of nausea, headache and excessive humidity. There is also the possibility of fatigue, dizziness and, in extreme cases, unconsciousness and death from a build-up of carbon monoxide in poorly ventilated rooms. All gas fired appliances produce as combustion products water vapour, carbon dioxide and, usually, trace concentrations of carbon monoxide. The amount of carbon monoxide produced depends upon the quality of the input air and on burner design and efficiency. Atmosphere sensitive devices are designed to shut off the gas supply to an appliance before the carbon dioxide content of the surrounding atmosphere exceeds a given level. However, they are not sensitive to carbon monoxide but their operation is such that they should prevent acute gassings and fatal accidents.

It is essential that adequate ventilation is provided and maintained in rooms in which heaters are used. Both high and low level ventilation is required and should never be blocked to prevent drafts. This may require windows to be kept open even in cold weather if fixed open vents are not available.

OPERATION AND MAINTENANCE

Many heaters have surfaces capable of causing burns. Employers should consider the means by which accidental contact with hot surfaces can be minimised and the appropriate precautions which they need to take. Suitable fire guards may be necessary. Heaters should be lit and controlled only by a trained and authorised person. Each heater should be checked for leaks and damage before it is lit each morning and when turned off at the end of the day. The check should include a visual examination to ensure that: the hose is not damaged or worn, that the cylinder and valves do not appear to be damaged or tampered with, that the connection between hose and cylinder is properly made and that the cylinder is not leaking. At the end of the day it is most important to ensure that the valve is turned off and to check that the cylinder is not leaking.

The cylinder should be changed only by a trained and authorised person. Before connecting it is essential to check that the connections are compatible and correct for the equipment. Connections should be tightened firmly but should not be over-tightened as this can lead to damage of threads. Where spanners are used for

tightening and undoing connections they should be of the correct size. The cylinder should be changed only in a well-ventilated place, preferably in the open air, but where it is not reasonably practicable to do so, all naked flames and other sources of ignition, eg cigarettes and any other heaters in the room should be extinguished. Students should not be present during cylinder changing.

It is not the job of a teacher or lecturer to carry out any of the above tasks.

EMERGENCY PROCEDURES

All staff should have received instruction and training appropriate to their responsibility in the event of an emergency. As part of the safe system of work each premise should have written procedures for dealing with a damaged appliance or cylinder, an escape of gas, or a fire. The procedure should include the steps which need to be taken should an incident occur.

Leakage without fire: If an appliance or cylinder is found to be leaking without the gas igniting, the action taken should include the following, providing, where appropriate, it is safe to do so.

(a) The main valve on the cylinder should be closed to cut off the gas supply.
(b) All possible sources of ignition should be extinguished.
(c) The room should be evacuated other than persons involved in the emergency procedures.
(d) The area should be ventilated.
(e) The appliance/cylinder should be removed to a well-ventilated place in the open air away from sources of ignition.
(f) Unauthorised approach to the appliance/cylinder should be prevented.
(g) If the leak persists the fire brigade should be called and informed that LPG is involved.

Leakage with fire: The gas from a leaking appliance/cylinder may catch alight. The action taken should include the following:

(a) Anyone who discovers a fire should sound the fire alarm.
(b) Persons not connected with the emergency procedures should be evacuated from the building.
(c) The fire brigade should be called and informed that an LPG cylinder is involved.
(d) The flame should be extinguished IT IS SAFE TO DO SO by turning off the value.
(e) If the flame from the leak is extinguished but vapour continues to escape, action should be taken as outlined in paragraph 6.2 above.
(f) If the flame cannot be extinguished, fire fighting should be left to the fire brigade and the building should be evacuated immediately.

Fire in the vicinity of an LPG heater: Action should include the following:

(a) The establishment’s fire and emergency procedures should be initiated.
(b) **IF IT IS SAFE TO DO SO** the gas supply should be shut off by closing the main value.

(c) **IF IT IS SAFE TO DO SO** the appliance/cylinder should be removed to a well-ventilated place, in the open air away from sources of ignition.

BOMB ALERTS

In addition to fire safety employers should also have procedures for handling the threat of terrorist attack. It is in the interest of visitors, consumers and staff for employers to draw up policies detailing what should be done in the event of a bomb alert. The policy should contain the following:

- the procedures to be followed in the event of a fire bomb;
- if staff are asked to search for suspicious objects, only trained volunteers should do this;
- training for all staff at all levels; and
- an outline of the after-care arrangements, such as counselling and financial support, for staff involved in an accident.

The policy should make it clear who will be responsible for deciding upon the action to be taken if a threat is received.

21. *OFFICE HAZARDS*

Cramped, unventilated and badly lit offices and staff workrooms and bases are a source of hazards. Work pressures can also put workers at risk. Equipment is often added to the office without consideration for the people who use it, nor its effects on noise, heat or space available.

Cramped conditions not only cause discomfort but increase the hazards of office workers tripping over wires or bumping into equipment. Overcrowding is usually worse when the office is in an unsuitable building, but even purpose-built offices can be outgrown and need careful planning to avoid accidents, and ensure that workers' health is not put at risk.

Electrical safety is as important in offices as in factories. Faulty electrical equipment can cause shock to users and may be a fire hazard. All electrical equipment should be regularly maintained and any unsafe equipment immediately taken out of service. No-one other than a trained mechanic should attempt to investigate the internal workings of any piece of equipment.

Fire precautions are poor in many offices. Fire exits may be locked or obstructed; extinguishers may be old and fire drills non-existent. Overcrowding increases the hazards, by making it more difficult to escape, should a fire occur.

Many offices are too hot, too cold, draughty and airless. People who work in such conditions talk of always feeling below par and having constant headaches, lethargy, dry throats and skin problems. Some cannot wear their contact lenses comfortably in the office and many say that their eyes are sore and itchy. In some cases, this general malaise can be identified as **sick building syndrome.** Such offices are likely to be air-conditioned and open-plan, with screens, partitions and banks of filing cabinets blocking the flow of air.

PHOTOCOPIER AND LASER PRINTER HAZARDS

If photocopiers and laser printers are badly positioned, poorly maintained and used frequently or for long runs, there are risks to health, ranging from irritated eyes, nose and throat to dermatitis and headaches. Proper ventilation and maintenance are essential.

Ozone is a gas produced during the high voltage electrical discharge in photocopiers and laser printers. It is sweet smelling and if you can smell ozone the levels are too high. Ozone breaks down in air quite quickly though this can be slowed by high humidity, temperature and some effects of office furnishings. Health effects are eye, nose, throat and lung irritation, dermatitis, headaches and nausea.

Carbon Monoxide is produced when toner (containing Carbon Black) is heated in an inadequate air supply. In poorly ventilated conditions the effects include headaches, drowsiness, faintness and increased pulse rate.

Toners are generally a mixture of plastic resign and Carbon Black often with other additives. Carbon Black is classified as a nuisance dust (i.e. only mildly toxic in itself) but will contain impurities known to be carcinogens. Toners should be handled with care, protective gloves should be worn, and dust release minimised. Contact with the tongue, i.e. by touching copied papers with a wetted finger can lead to small growths on the tongue. Other health effects may be irritated eyes, headache and itching skin. Maintenance workers are at risk from repeated exposure which can lead to skin and eye sensitisation.

Other hazards

Ultra violet light: photocopier lids should be kept closed when the machine is in use. Ultra violet light can cause eye irritation.

Noise levels can reach up to 65dB(A) for ordinary copiers. Care should be taken in siting copiers with noisy equipment as far from workers as possible.

NOISE

The increasing use of machinery in offices can make noise levels intolerable. Noise interferes with concentration and makes working stressful. A noise level of 60 dB(A) is thought to be about right for office work, but many offices are much noisier than this. One survey found that 80% of office workers in an open-plan office were disturbed by noise. There are several ways to make offices quieter:

- double-glazing can reduce noise coming in from the street;
- Safety Reps can negotiate an agreement with employers to ensure that they will not purchase any equipment which produces more than a certain maximum level of noise;
- acoustic hoods can be purchased for any noisy printers;
- the amount of shiny surfaces which reflect noise can be reduced; and
- decisions about the number of people, the amount of furniture and equipment to be in any room must take account of the effect on the noise level.

LIGHTING

Lighting can cause many problems and consideration must be given to the amount and type of lighting and where desks and working areas are placed in relation to the lighting fitments. In some offices people work totally in artificial lighting and very far away from windows. Lighting fitments may be broken, flicker or be dirty, and can be inadequate in store rooms and on staircases. Many offices do not have an emergency system for staircases and corridors in the event of a power cut. Some office jobs require extra task lighting to provide sufficient light to do the job well.

VDU screens are too often placed in offices without any understanding of the importance of avoiding glare and reflection from windows, lights and other screens. This means that the image on screen could be unclear and much harder to read (see following Chapter for requirements when using VDUs).

The requirements of the Workplace (Health, Safety and Welfare) Regulations 1992 (as amended) should be complied with.

See Chapter 27 for EIS advice on Working Conditions.

22. *DISPLAY SCREEN EQUIPMENT (DSE)*

POSSIBLE HEALTH AND SAFETY PROBLEMS

Working with computers or VDUs, otherwise known as DSE (Display Screen Equipment), can produce a wide range of different health problems. Some of the symptoms produced are relatively minor and disappear when the source of the problem is removed but others can produce longer term health damage.

The most common health problem reported by DSE workers is eye strain. This can result in deterioration in visual acuity, tiredness and soreness of the eyes and headaches. Although it is sometimes argued that visual performance can be affected in the long term by use of DSE, there is little medical evidence to support this. Work Related Upper Limb Disorders (WRULDs), previously known as Repetitive Strain Injury (RSI), may be suffered by DSE users. Guidance in the regulations on DSE set out standards on good ergonomics which should be sufficient to protect workers against this type of injury. Any worker suffering from symptoms such as soreness or tenderness of the fingers, hands, wrists, arms, neck or elbow should notify their safety representative and seek medical advice immediately.

A further medical condition which has been claimed to be aggravated by using a DSE is photosensitive epilepsy. Most people with photosensitivity epilepsy will know of their condition from watching television, before coming into contact with a DSE. Anyone who suspects that they may be susceptible to visually induced epilepsy should consult a doctor before working on a DSE.

There have been a number of recorded cases of rashes on the face or hands amongst DSE operators which have been linked to the DSE. Some DSE build up an electric charge on the face of the screen. This electrical charge may contribute to facial rashes in sensitive workers.

THE DISPLAY SCREEN EQUIPMENT AT WORK REGULATIONS 1992

The Display Screen Equipment Work Regulations 1992 (as amended) came into force on 1st January 1993 and implement a European directive on minimum safety and health requirements for work with display screen equipment. These regulations should be used in conjunction with the Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1999 and the Workplace (Health, Safety and Welfare) Regulations 1992 (as amended). The regulations apply wherever DSE is used, including offices, classrooms, computer suites, hospitals and work at home. All workstations used by employees should now be assessed.

Employers Duties:

– assess risks to health from DSE workstations and reduce the risks identified by assessments to the lowest level reasonably practicable. Assessments must be kept up to date.
– ensure that workstations comply with standards laid down by the Regulations.
– plan the work of DSE users so that there are periodic breaks or changes of activity reducing their workload at the display screen equipment.
– ensure that DSE users are provided with:

- **eye and eyesight test** on request
- further tests at regular intervals
- additional tests on request for users who experience visual difficulties (such as headaches)
- spectacles, where tests show these are needed for DSE work.

– provide health and safety training for DSE users.
– provide information on all aspects of health and safety relating to workstations, and on measures taken to comply with the Regulations.

Employees' duties

There are no specific duties of employees in these Regulations. However the **Management of Health and Safety at Work Regulations 1999** requires all employees to use equipment provided in accordance with the training and instructions given by their employer.

NOTE: "Workstation" in these Regulations doesn't just mean a desk. It also means, for example, the screen, keyboard, disk drive, printer, document holder, chair, work surface; and lighting, temperature, noise and space around the display screen equipment.

REQUIREMENTS FOR ALL WORKSTATIONS USED BY EMPLOYEES

The minimum safety requirements for workstations are contained in the Schedule to the Regulations and are as follows:

Equipment

2. (a) General comment

The use as such of the equipment must not be a source of risk for operators or users.

(b) Display screen

The characters on the screen shall be well-defined and clearly formed, of adequate size and with adequate spacing between the characters and lines.

The image on the screen should be stable, with no flickering or other forms of instability.

The brightness and the contrast between the characters and the background shall be easily adjustable by the operator or user, and also be easily adjustable to ambient conditions.

The screen must swivel and tilt easily and freely to suit the needs of the operator or user.

It shall be possible to use a separate base for the screen or an adjustable table.

The screen shall be free of reflective glare and reflections liable to cause discomfort to the operator or user.

(c) Keyboard

The keyboard shall able to tilt and separate from the screen so as to allow the operator or user to find a comfortable working position avoiding fatigue in the arms or hands.

The space in front of the keyboard shall be sufficient to provide support for the hands and arms of the operator or user.

The keyboard shall have a matt surface to avoid reflective glare.

The arrangement of the keyboard and the characteristics of the keys shall be such as to facilitate the use of the keyboard.

The symbols on the keys shall be adequately contrasted and legible from the design working position.

(d) Work desk or work surface

The work desk or work surface shall have a sufficiently large, low reflectance surface and allow a flexible arrangement of the screen, keyboard, documents and related equipment.

The document holder shall be stable and adjustable and shall be positioned so as to minimise the need for uncomfortable head and eye movements.

There shall be adequate space for operators or users to find a comfortable position.

(e) Work chair

The work chair shall be stable and allow the operator or user easy freedom of movement and a comfortable position.

The seat shall be adjustable in height.

The seat back shall be adjustable in both height and tilt.

A footrest shall be made available to any operator or user who wishes one.

Environment

3. (a) Space requirements

The workstation shall be dimensioned and designed so as to provide sufficient space for the operator or user to change position and vary movements.

(b) Lighting

Any room lighting or task lighting provided shall ensure satisfactory lighting conditions and an appropriate contrast between the screen and the background environment, taking into account the type of work and the vision requirements of the operator or user.

Possible disturbing glare and reflections on the screen or other equipment shall be prevented by co-ordinating workplace and workstation layout with the positioning and technical characteristics of the artificial light sources.

(c) Reflections and glare

Workstations shall be so designed that sources of light, such as windows and other openings, transparent or translucent walls, and brightly coloured fixtures or walls cause no direct glare and no distracting reflections on the screen.

Windows shall be fitted with a suitable system of adjustable covering to attenuate the daylight that falls on the workstation.

(d) Noise

Noise emitted by equipment belonging to any workstation shall be taken into account when a workstation is being equipped, with a view in particular to ensuring that attention is not distracted and speech is not disturbed.

(e) Heat

Equipment belonging to any workstation shall not produce excess heat which could cause discomfort to operators or users.

(f) Radiation

All radiation with the exception of the visible part of the electromagnetic spectrum shall be reduced to negligible levels from the point of view of the protection of operators' or users' health and safety.

(g) Humidity

An adequate level of humidity shall be established and maintained.

Interface between computer and operator/user

4. In designing, selecting, commissioning and modifying software, and in designing tasks using display screen equipment, the employer shall take into account the following principles:

(a) software must be suitable for the task;
(b) software must be easy to use and, where appropriate, adaptable to the level of knowledge or experience of the operator or user; no quantitative or qualitative checking facility may be used without the knowledge of the operators or users;
(c) systems must provide feedback to operators or users on the performance of those systems;
(d) systems must display information in a format and at a pace which are adapted to operators or users;
(e) the principles of software ergonomics must be applied, in particular to human data processing

EYE TESTS

The DSE Regulations 1992 regulation 5 states that at commencement of the job and at regular intervals thereafter, it is recommended that all DSE workers should be given a thorough eye examination by a qualified ophthalmologist.

VISUAL CORRECTION

The regulations require that the cost of any visual correction which is necessary in order to work with DSE should be borne by the employer. This is particularly the case where existing spectacles are unsuitable for viewing at a typical DSE viewing distance of 50-60cm

RECOMMENDATIONS

The arrangement of the DSE within the total work environment is of prime importance in ensuring that there are no risks to the health and safety of employees. One of the most attractive selling points of the newer generations of microelectronic-based computer systems is that they do not, unlike their predecessors, need carefully temperature-controlled, air-conditioned, dust-free conditions. One result of this is that the computers and the DSE linked to them are often placed in offices suited to other tasks without any thought for the comfort or

health of the people who are using them or with insufficient space for the job concerned to be carried out properly.

Lighting

Comfortable levels of light should be provided for users of DSE. Other aspects of lighting such as blinds, windows, reflections from surfaces etc. should also be taken into account to ensure that glare is avoided.

Glare is a general term describing other light sources within the field of vision significantly greater than the luminance of the DSE screen vision which cause a reduction in the legibility of the DSE display and which can add to the visual load. This can cause eyestrain and visual fatigue. In medical terms severe glare which reduces operator efficiency is known as disability glare whereas less severe glare which 'merely' adds to the visual fatigue is known as discomfort glare. From the workers' point of view, however, both are equally unacceptable.

Glare can be either direct, from lights or windows, or indirect as a result of specula (recognisable image) or diffuse reflections either of light sources or of reflective surfaces. Positioning the DSE correctly should eliminate direct glare. Indirect glare can best be tackled by ensuring that, as far as possible, large reflective surfaces in the immediate vicinity of the DSE result in luminance levels similar to those of the DSE screen. The desk in particular should be chosen in order to minimise reflections, i.e. it should not be too lightly coloured and the surface should be matt not glossy.

Temperature and humidity

A comfortable temperature and relative humidity is an important aspect of health and safety provision for workers of all types, not just for those who operate DSE. The visual and postural problems which arise from the operation of DSE can be aggravated by unsatisfactory temperature and humidity. Heat from DSE screens and draughts from fans can also aggravate visual fatigue by drying out the mucous membranes of eyes and nose. For all these reasons it is particularly important to ensure that adequate standards governing temperature and humidity in DSE workplaces are observed.

Noise

DSE themselves do not normally present a serious noise problem, most of them being much quieter than other office machines. Nevertheless many DSE tasks require a significant degree of mental effort and noise from related machines such as printers or even from the DSE cooling fan can be irritating. A great deal can be done often at very little cost, to reduce noise in DSE workplace, for example by:

- positioning equipment (for example placing printers in a separate room);
- installing acoustic hoods;
- installing sound absorbing material on walls and ceilings; and
- use of enclosures or partitions;

THE WORKSTATION

General

One of the most critical factors affecting the health of DSE workers is the design and layout of the DSE workstation. A badly arranged workstation (desk, chair, wrongly positioned DSE and document holder) can lead to the adoption of a bad working posture with consequent back pains, neck pains, etc, as well as serious repetition injuries (tenosynovitis, carpal tunnel syndrome) and can aggravate visual problems.

Adjustability

The most important factor in workstation design is adjustability. Reference has already been made to the need for adjustability of the screen and keyboard. Equally important is adjustability in the height of these units and in the support given to the employee's back by the chair which is used. Adjustment is important both because people of different shapes and sizes use DSE and because different DSE are used for different jobs.

Basic principles of workstation layout

Most DSE workstations consist of a desk/table and a chair. In some circumstances a footrest may also be needed. The dimensions of the various components of the workstation should be arranged and adjusted so as to fulfil the following objectives which are necessary for an ergonomically sound work posture:

- the feet should be touching the floor - or, if this is not possible, a footrest should be provided;
- there should be adequate leg room, both horizontal and vertical for comfortable working and stretching;
- there should be adequate support for the back;
- the DSE should be at a height which permits it to be viewed with the head at a comfortable angle;
- the DSE should be at a height and inclination which permits a viewing angle of 90^{o};
- the viewing distance should be comfortable and within the range specified below;
- the height of the desk and keyboard must be sufficient to prevent any significant flexion of the wrist (either up or down) during keyboarding;
- the document holder (as appropriate) must be positioned to minimise neck movement and at the same viewing distance as the screen and keyboard; and
- wrist or palm rests should be provided where necessary.

23. *THE ADMINISTRATION OF DRUGS IN SCHOOLS*

1. CURRENT PRACTICE

The administration of drugs, e.g. adrenaline (administered by injection or epi-pen), rectal diazepam and insulin, is not a contractual duty for teachers or lecturers.

2. THE LEGAL BACKGROUND

In 1995 the Strathclyde Regional Council sought opinion of Counsel with regard to the administration of drugs and medicines in schools and the following summarises the main terms of that opinion:

(a) Teachers are not, in general, obliged to participate in the health care tasks which, more properly, are the province of the appropriate health authority. However, as a teacher, temporarily, stands “in loco parentis” there remains a duty to secure such medical treatment “as is practical and the occasion demands”.

(b) An education authority is not obliged to supervise treatment (eg the taking of medicine in schools) and if a teacher does so negligently, both the teacher and the authority may incur liability. However, if the teacher has the consent of the employing authority in participating in these tasks it is the education authority which would be vicariously liable for the teacher’s actions. Clearly it is incumbent on the education authority to ensure that any teacher performing these functions is properly equipped and trained.

(c) That, in a situation where teachers are involved, to some extent, in the administration of medicines with the full consent and authority of the employer, those teachers are entitled to be indemnified by the education authority in respect of any claims arising out of the performance of those functions.

(d) It is legitimate, therefore, for education authorities to facilitate, as far as possible, the administration of medical treatment to enable certain pupils to attend school notwithstanding that the legal obligation of providing medical treatment and services (and the costs involved) lies with the health authority. Therefore, in the absence of agreed arrangements between the school and the child’s parents that medicines will be administered or that administration supervised, it would be incumbent on the parents to make their own arrangements for the administration of any medicine using, if necessary, the support of the health authorities.

3. EIS ADVICE TO MEMBERS

As previously indicated a significant number of pupils have conditions which may, under certain circumstances, require the emergency administration of drugs in order to avoid any danger to life, eg diabetes, allergic anaphylaxis, asthma and epilepsy The EIS, therefore, offers the following advice to all members in schools regarding the administration of drugs and medicines to pupils.

a) That the prime responsibility for ensuring that medication is administered to school pupils lies with the parents and appropriate health authority services. It is the case, however, that it is a duty of an education authority to co-operate with health authorities in the provision of health treatment.

(b) The administration of drugs to pupils is not a teacher's duty and should not be undertaken other than on a **voluntary** basis.

(c) It is the advice of the Institute that teachers should not volunteer to administer drugs to pupils except in the following circumstances:

(i) to provide cover for the emergency administration of a drug in a potentially life-threatening situation. In addition teachers should <u>not</u> supervise the routine taking of any medicine by the pupil without the express consent of both the parent and the education authority which should be included in a formal document or formal agreement;

(ii) a teacher who agrees to volunteer to administer drugs in an emergency situation must be given full training by the relevant health authority and that this training must be updated on at least an annual basis. It is also recommended that the health authority provides formal certification for all staff concerned to include all basic training and refresher/update courses and the date(s) of completion;

iii) the education authority must provide every volunteer teacher with a formal statement of indemnification signed both by the teacher and a representative of the education authority. The following wording would constitute an acceptable formal statement of indemnification:

"The Council fully indemnifies its staff against claims for alleged negligence, providing they are acting within the scope of their employment, have been provided with adequate training, and are following the education authority's guidelines. For the purposes of indemnity, the administration of medicines falls within this definition and hence the staff can be reassured about the protection their employer provides. The indemnity would cover the consequences that might arise where an incorrect dose is inadvertently given or where the administration is overlooked. In practice indemnity means the Council and not the employee will meet the cost of damages should a claim for alleged negligence be successful. It is very rare for school staff to be sued for negligence and instead the action will usually be between the parent and employer."

24. *HEAD LICE*

The Stafford Report, Guidelines on the Diagnosis and Treatment of Head Lice stated:

"Head lice are not primarily a problem for schools, but of the community. Stigma and tradition, however, combined with inadequate public and professional knowledge continue to hold schools responsible."

This report has given rise to changes in the way head lice infection is managed. NHS Boards in Scotland have developed their own guidelines on the management of head lice infection and recent guidance from the Scottish Executive sought to promote a consistent approach. The guidance document 'National Guidance on Managing Head Lice Infection in Children' can be downloaded from the website: www.scotland.gov.uk.

NHS Boards and Local Authorities are required to establish a policy on the management of head lice infection that is consistent with the guidance.

Responsibility for the problem

The responsibility for eradicating the problem lies primarily with the parents. Obviously the health care educators and professionals have a very important part to play but for them the difficulty of access to parents is so often apparent. It is the view of many of those involved in health care that the best means of access to parents is through the schools and the union would not wish to discourage this important line of approach. However, the Scottish Executive's guidance specifically discourages the use of 'alert letters' to parents of other children in the class of a child who is infected. Only the parents of an infected child should be informed by writing or telephone.

The Scottish Executive's view is that exclusion of pupils should not be used to manage head lice infection as a matter of course. The power to exclude lies with education authorities who are required to establish and implement exclusion guidelines. As head lice infection is not considered a disease or danger to health there is no statutory provision to allow exclusion.

INTERESTING FACTS ABOUT HEAD LICE

- Anyone can catch head lice.
- Clean hair is no protection against lice.
- It can take up to three months to become sensitised to the louse's bite and feel itchy Adult lice take every opportunity to exchange hosts to avoid extinction through inbreeding. Transmission is by means of head to head contact.
- Eggs are laid by the adult lice and glued to the hair shaft. Once these hatch they remain glued to the shaft and are then known as nits.
- Treatment is by a special insecticidal lotion. Ask the school nurse, health visitor or chemist which brands are recommended. The local clinic or health centre will supply the treatment free for children. Alternatively wet combing ('bug busting') can be used and the 'Bug Buster Kit' is available from pharmacies.

- Preventive use of insecticidal products should be discouraged as it can be a contributory cause of the development of insecticide resistance.
- Treatment in the form of special lotions is far more effective than medicated or special shampoos.

CONCLUSION

It is apparent that the successful eradication of head lice from the community is largely a question of the direction of sufficient resources by the health authorities to the problem. At present this is not taking place and until health authorities recognise the scale of the problem and redirect sufficient resources to fight it, head lice will continue to spread throughout communities.

Whilst the problem of head lice is the responsibility mainly of parents and the health professionals, schools do have a part to play in the distribution of information to parents and the feedback of information to those responsible for school health matters.

25. *INTERACTIVE WHITEBOARDS*

Following media reports which highlighted possible adverse effects to eyesight from the use of Interactive Whiteboards the Health and Safety Executive has provided the following advice:

HSE'S ADVICE

Computer projectors, which are used to show presentations or to illuminate interactive whiteboards, can expose the eye to levels above the exposure limits which HSE use as a guide for compliance with legislation. The HSE considers the following guidelines to be good practice in respect of the use of these projectors:

Guidelines

Employers should establish work procedures for teachers/lecturers and pupils/students and give instruction on their adoption so that:

Staring directly into the projector beam is avoided at all times.

Standing facing into the beam is minimised. Users, especially pupils and students, should try to keep their backs to the beam as much as possible.

In this regard, the use of a stick or laser pointer to avoid the need for the user to enter the beam is recommended.

Pupils and students are adequately supervised when they are asked to point out something on the screen.

Employers should also try to ensure that projectors are located out of the sight line from the screen to the audience; this ensures that, when presenters look at the audience, they do not also have to stare at the projector lamp. The best way to achieve this is by ceiling-mounting rather than floor or table-mounting the projector.

In order to minimise the lamp power needed to project a visible presentation, employers should use room blinds to reduce ambient light levels.

Following the Health and Safety Executive's guidelines will ensure that Whiteboards are used without adverse effects to eyes or eyesight.

26. *NEW BUILDS AND REFURBISHMENTS*

Safety Representatives have a legal right to be consulted on all health and safety matters (Safety Representative and Safety Committee Regulations 1977), including those related to the provision of new or refurbished workplaces. See Chapter 4 for further details of legal rights and the role of Safety Representatives.

New Builds

Where the new build site is completely separate from the existing building(s) the on-going health and safety issues for workers on the building site are not the concern of the EIS and there is no right of consultation. However, if the building site is adjacent to the school/college there may be health and safety issues relating to site security, access and environmental conditions.

Refurbishments

There will be on-going health and safety issues during the work as well as those that may arise from the finished product. Consultation is required on both types of issue.

Consultation at Planning Stage

Consultation should involve the Local Association/Branch, Safety Representatives and staff. Safety Representatives should be given access to specification and designs/plans. Consultation should cover both health and safety issues (room space, environmental conditions etc) and the requirements for teaching and learning. There is no legal right to consultation on matters other than health and safety but arrangements for this should be agreed between the employer and unions. Involvement and participation at this stage is crucial as design errors are costly and time consuming to rectify once the building is in operation.

The specification and design should comply with Scottish Executive guidance, Building Regulations and health and safety legislation (ie to enable compliance with Fire Regulations/Act, The Workplace (Health, Safety and Welfare Regulations) 1992 (as amended) and Building Regulations. Chapter 7 outlines the health and safety legal requirements for workplace conditions.

The planning stage should also consider the operational and health and safety issues that may arise during the building stage. Agreement should be reached on the channels of communication and on the protocols for dealing with problems and emergencies.

Consultation at Building Stage

New Builds

Health and safety of workers on the site and of the public is a matter for the main building contractor but if this work has an impact on EIS members (due to location of site) Safety Representatives should raise these with the head teacher/health and

safety officer in the first instance. If there is not a satisfactory response advice and support should be sought from the EIS Local Association Secretary/Branch Secretary.

If there are design changes during this stage there should be consultation if this is likely to result in health or safety issues for staff, for example, removing air conditioning or changing specification for floor coverings.

Refurbishments

As well as consultation on design changes there are also on-going health and safety issues when a building site and an educational establishment co-exist. The arrangements, protocols, procedures should have been agreed at the planning stage. There should be agreed access to all information relating to health and safety for Safety Representatives, there should be a defined protocol for raising concerns and agreement on a procedure for action to be taken.

If there is asbestos present in the building extra safety measures must be taken. Safety Representatives should be consulted on the arrangements and the legal restrictions and requirements must be followed by contractors (see Chapter 11 for further details).

Hazards such as noise and dust should be considered not just from a health and safety perspective but also with respect to the impact on teaching and learning. It can also be argued that the increased stress that adverse working and teaching conditions places upon members can make levels of noise or dust which are below occupational exposure standards unacceptable in an educational working environment.

Safety Representatives should request information on plans and on how the work is to be progressed, timing and order of work. All complaints and concerns should be in writing so there is a record of what has gone wrong and the resulting actions should also be recorded.

There should be agreement on who has the right to stop building activities (head teacher/health and safety officer) if there is a risk of injury to staff or pupils and the site supervisor/manager cannot be immediately contacted to do this.

Safety Representatives are entitled to time to carry-out their functions, for example, investigating complaints and conducting inspections and time for this should be allowed and planned for.
Where action is not being taken to resolve on-going problems or problems which will arise when the building work is completed advice and support should be sought from the Local Association Secretary/Branch Secretary.

Moving In

It would be good practice for there to be a safety inspection, by the employer's safety adviser/officer and union representatives prior to the building being occupied. This is an opportunity to identify any problems relating to the specification not being

fully implemented, for example the failure to put in storage, windows, sufficient lighting and inappropriate windows etc.).

Risk assessments should be undertaken or, in the case of refurbishment, revised. Risk assessment is not the responsibility of the Safety Representative but there should be consultation and access to the risk assessment findings and records.

A safety inspection should take place when the building is fully operational and inspections should be carried out at least once a year (see Chapter 5 for further guidance).

When moving in to the new or refurbished building teachers/lecturers should not undertake manual handling which could cause injury. The arrangements for both decanting and moving in or moving back are also a matter for consultation with staff and Safety Representatives.

27. *GUIDANCE AND POLICIES*

ASBESTOS: TUC GUIDANCE

The Control of Asbestos Regulations 2012
A guide for safety representatives

Asbestos has been the main cause of occupational ill health from about 1950 onwards and is still the greatest single work-related cause of death from ill health.

Past exposure is now responsible for about 4000 people dying from asbestos related cancers every year. This figure is expected to rise over the next ten years and then decline.

These deaths are tragic for the people involved, causing immense pain and suffering to them and their relatives, friends and colleagues.

Safety representatives play an important role in controlling workplace risks and can help to prevent exposure to asbestos. You are entitled to be provided with any information you need on asbestos, including any risk assessments and surveys. You should also be consulted on your employer's plans to manage asbestos.

This is a brief guide for safety representatives on asbestos and the new Control of Asbestos Regulations 2012 (the Regulations). It does not cover the legal functions of safety representatives.

What is asbestos?

Asbestos is the name used for a range of natural minerals.

There are three main types of asbestos:

- blue (crocidolite);
- brown (amosite);
- white (chrysotile).

The type of asbestos cannot be identified just by its colour.

Asbestos has been used in a very large number of products, many of which have been used in buildings. Some products have one type of asbestos in them while others have mixtures of two or more.

All types of asbestos can be dangerous.

Why is it dangerous?

Asbestos is made up of thin fibres. These can break down into much smaller and thinner fibres. The smallest fibres cannot be seen with the naked eye but they can be breathed in.

Asbestos fibres are only dangerous if they are made airbome and breathed in, but ALL types of asbestos fibres are potentially fatal if breathed in.

The fibres that are breathed in can become stuck in the lungs and damage them. This can cause scars that stop the lungs working properly (asbestosis), or it can cause cancer. The main types of cancer caused by asbestos are cancer of the lung and cancer of the lining of the lung (mesothelioma).

These diseases can take from 15 to 60 years to develop and there is no cure for any of them.

Where do you find asbestos?

You are most likely to find it in buildings built or refurbished before 2000. Many thousands of tonnes of asbestos products were used in buildings. Much of it is still there and you cannot easily identify these products from their appearance.

The most common uses of asbestos in buildings were:

- loose packing between floors and in partition walls;
- sprayed ('limpet') fire insulation on structural beams and girders;
- lagging, eg on pipework, boilers, calorifiers, heat exchangers, insulating jackets for cold water tanks, around ducts;
- asbestos insulation board (AlB), eg ceiling tiles, partition walls, soffits, service duct covers, fire breaks, heater cupboards, door panels, lift shaft linings, fire surrounds;
- asbestos cement (AC), eg roof sheeting, wall cladding, walls and ceilings, bath panels, boiler and incinerator flues, fire surrounds, gutters, rainwater pipes, water tanks;
- other products, eg floor tiles, mastics, sealants, textured decorative coatings (such as artex), rope seals, gaskets (eg pipework), millboards, paper products, fire doors, cloth (eg fire blankets), bituminous products (roofing felt).

Remember - how dangerous the asbestos is depends on the type of asbestos and the type of material it is in, the condition of the material, and how likely the material is to be disturbed.

Who is likely to be exposed to asbestos fibres?

Anyone who disturbs asbestos-containing materials, for example, by working on them or near them.

Research has suggested that the groups most at risk are those who carry out building maintenance and refurbishment work, for example (this is not a complete list, nor in any particular order):

- demolition contractors;
- electricians;
- roofing contractors;
- painters and decorators;
- construction contractors;
- joiners;
- heating and ventilation engineers;
- plumbers;
- telecommunications engineers;
- gas fitters;
- fire and burglar alarm installers;
- plasterers;
- general maintenance staff;
- builders;
- computer installers;
- shop fitters;
- building surveyors.

What's new in the Control of Asbestos Regulations 2012?

The duties under the Control of Asbestos Regulations 2012 are largely the same as under the previous regulations, but there are some important changes:

- There is a new, lower control limit (which no one must go over) of 0.1 fibres per millilitre of air measured over four hours.
- Work with textured coatings will, generally, not need to be done by a licensed contractor. It will still need to be done safely by trained, competent people working to certain standards.
- Employers can no longer carry out work in their own premises with their own workers without a licence if the work would otherwise require a licence.
- The Regulations are clearer on training. Suitable training is required for anyone who is, or may be, exposed to asbestos.

What is a licence?

Work with the most dangerous asbestos-containing materials (which give off high fibre levels when disturbed), requires a licence from the Health and Safety Executive (HSE). Work with most asbestos-containing materials requires a licence.

A licence is required for virtually all work with loose packing, sprayed insulation, lagging and asbestos insulation board. Very minor work (which, in total, takes one person no more than one hour, or more people no more than two hours in any seven-day period) does not require a licence.

A licence is not required for work when a risk assessment confirms that the exposure (without a respirator) will not go above 0.6 fibres per millilitre in any ten minute period or go over the control limit and the work involves certain materials. So, a licence will generally not be required for work involving asbestos cement, textured coatings and other materials where the fibres are firmly held in a matrix (eg vinyl floor tiles and bituminous products such as roofing felt).

What do the Regulations say and what should I do?

This section tells you a little more about the Regulations and suggests the questions you should ask your employer.

The Regulations apply to all work with asbestos materials carried out by employers, the self-employed and employees. They apply to all work with asbestos whether it requires a licence or not.

Remember, this is a very brief summary of some of what the Regulations say.

Managing asbestos in buildings (regulation 4)

Whoever has control of a building has a duty to manage the asbestos in their buildings - your employer should be able to tell you who this is. The duty holder has to take reasonable steps to find out if there are materials containing asbestos in the premises and, if so, how much, where they are and what condition they are in. This can - but does not have to - involve a survey. A survey can be:

- Type 1 - presumptive. This is to locate materials assumed to contain asbestos and note what condition they are in. No sampling is done.
- Type 2 - sampling. This is the same as type 1 but samples are taken and analysed to confirm whether asbestos is present.
- Type 3 - full access. This involves getting full access to all parts of the building, using destructive inspection if necessary. This type is usually used just before demolition or major refurbishment.

The results of all types of survey should be recorded and the information provided to anyone who may work on, or disturb, these materials. Safety representatives are entitled to this information.

- Has any survey been done? If so, which type?
- Does it cover all parts of the building? If not, why?
- Is the information readily available and understandable?
- Is it given to anyone who needs it, eg contractors?

A suitable risk assessment should be made before carrying out any work which may expose employees to asbestos.

- If any work which will, or could, disturb asbestos is planned, has the risk assessment been done by a competent person?
- Does it relate specifically to the particular job and site?
- Does it cover other risks (like falls from height or electricity)?

Those who control premises need to manage the risk from asbestos and ensure that an assessment is made as to whether asbestos is, or may be, present in the building. This includes where the asbestos is, or is assumed to be and what condition it is in. It should always be assumed that asbestos could be present until a full survey is done.

- If you suspect that there may be asbestos in your building, what has been done to manage the risks from it?
- Ask to see any assessments or the results of any survey.
- Do the assessments tell you where the asbestos is, may be, or is assumed to be?
- How are people made aware of asbestos and what to do about it?
- How will anyone coming in to do work, such as a contractor, be made aware and will the way they work be monitored?

Identifying the presence of asbestos (regulation 5)

No employer must carry out demolition, maintenance or any other work which exposes, or may expose, their employees to asbestos in any premises unless they have found out:

- whether asbestos is, or may be, present;
- what type of asbestos it is;
- what material it is in; and
- what condition it is in; or
- if there is any doubt about whether asbestos is present, the employer has assumed that it is present and that it is not only white asbestos.

- Is all this information readily available, or has the employer said that they will assume asbestos is present?
- Is the information clear and easy to understand?
- Are there any parts of the building which have not been checked?

Planning work (regulation 7)

No work should be carried out with asbestos unless a written plan of work detailing how that work is to be carried out has first been prepared.

- Is there a plan of work?
- Does it say clearly how the work will be done?
- How is the waste going to be removed?
- How will the employer make sure that the work is done in the way the plan says it should be?
- Have other risks which may be present (like falls from height and electricity) been considered as well?
- How will employees be informed?

Information, instruction and training (regulation 10)

Every employer must give adequate training (which includes information and instruction) to employees who are, or may be, exposed to asbestos, their supervisors and those who do work to help the employer comply with these Regulations. This should make them aware of (among other things);

- the properties of asbestos, its health effects and the interaction of asbestos and smoking;
- the type of materials likely to contain asbestos;
- what work could cause asbestos exposure and the importance of preventing
- exposure;
- how work can be done safely and what equipment is needed;
- emergency procedures;
- hygiene facilities and decontamination.

The training must be given at regular intervals. It needs to be proportionate to the nature and degree of exposure and so should contain the appropriate level of detail, be suitable to the job, and should use written materials, oral presentation and demonstration as necessary.

- Has everyone who is, or may be, exposed to asbestos been given enough
- information, instruction and training to enable them to safeguard their health? [1] Was the training suitable for the job?
- Are there arrangements to train new people?
- Are there arrangements for regular refresher training?

Preventing or reducing exposure (regulation 11)

Employers have a duty to prevent exposure so far as is reasonably practicable.
If exposure cannot be prevented, it must be reduced so far as is reasonably practicable without workers having to use masks. If that has been done but the exposure would still be above the control limit, the employer has to provide suitable masks which reduce the workers' exposure to below the control limit and as far below it as is reasonably practicable. It is good practice to use masks and other personal protective equipment even at levels below the control limit.

- Has this approach actually been taken?
- How will the employer make sure that the workers are not exposed to more than the control limit? It is not always necessary to carry out air tests, for example when it is well known what exposure levels an activity generates - and the worst levels are assumed. Air tests may be needed to confirm that the controls are working.

If any employee is exposed to more than the control limit, the employer must:

- inform the employees concerned and their representatives;
- ensure that the work does not continue until adequate action has been taken to reduce exposure to below the control limit;

- find out why the control limit was exceeded and take action to prevent it happening again, and take air samples to make sure this action was effective.

Employers need to ensure that whatever controls they put in place are properly maintained and used. This includes providing any necessary supervision.

Employees need to make sure they use any controls properly:

- Do the employees know how to use the controls in place?
- Do they know what to do if they suspect the controls are not working properly?
- The employer should make arrangements to deal with accidents, incidents and emergencies. These should minimise the effects of the event and restore the situation to normal. Anyone who may have been affected should be informed immediately.
- Do these arrangements exist and does everybody know about them? [1] Is it clear who is responsible and what for?
- What happens when those people are absent?
- Sampling, air tests and clearance certification (regulation 20)
- All air testing, sampling of asbestos and (from 6 April 2007) clearance certification must be carried out by someone who is accredited by an appropriate body. UKAS (the United Kingdom Accreditation Service) is the only such national accreditation body recognised by the Government.
- Do reports show the UKAS accreditation logo shown here?

Health records and medical surveillance (regulation 22)

Apart from a few exceptions (where exposure is very low), for each employee who is exposed to asbestos, employers have to:

- keep a health record;
- keep the record (or a copy) for at least 40 years;
- ensure the employees are under adequate medical surveillance by a relevant doctor;
- provide a medical examination not more than two years before such exposure and one at least every two years while such exposure continues (certificates of examination need to be kept for four years);
- tell the employee if the medical shows any disease or ill-health effect from the exposure.

Employees have to be available during working hours for medical examination.

Washing and changing facilities (regulation 23)

Employers must provide adequate washing and changing facilities for employees who are, or may be, exposed to asbestos.

- Are these adequate and well maintained?
- Are males and females catered for?

What should I do if I suspect asbestos materials are present?

If a safety representative suspects that there are asbestos materials in a building, they should ask the employer what has been done to determine if such materials are present. Safety representatives can ask to see the results of any inspection or survey done to identify the presence, and condition, of asbestos materials.

Remember that there is only a risk if asbestos fibres are made airborne. This can happen when asbestos materials are damaged or disturbed. However, all asbestos-containing materials should be clearly marked, even if in good condition.

If you see material which you have reason to believe contains asbestos, it has been damaged and you believe that there is a serious risk of exposure to asbestos fibres, you should ask everyone to leave the area. But remember not to create more of a risk to people by, for example, causing a panic or leaving something in an unsafe condition. Remember also that minor damage to some asbestos materials does not always mean that there is a serious risk or that immediate evacuation of the area is warranted, for example minor damage to materials securely bound in a matrix such as textured coatings or asbestos cement. However, damaged edges should be coated immediately, and repaired as soon as possible.

In any case, you should notify the employer or occupier immediately. No further work should take place until the area is safe. That means that action - appropriate to the risk - has been taken. Such action could be the repair or removal of asbestos or cleaning of the area by a trained person with suitable equipment.

When anyone needs to work in a building built or refurbished before 2000, or with something which may contain asbestos, ask:

- Is asbestos present?
- What is the safest way to do the work?
- Can you look at the risk assessment for the job (which should tell you what the risks are and how to control them)?
- Is the work such that it should only be done by a licensed contractor?

Workers can do certain jobs with asbestos which do not require a licence, but their employer must ensure that they are adequately trained and have the right equipment. The employer must ensure that they:

- have received adequate training first;
- are provided with and always wear a suitable mask;
- are provided with disposable overalls;
- are provided with a class HEPA vacuum cleaner to vacuum up dust;
- do not cut or drill into asbestos with power tools (unless it is unavoidable - in which case the employer must ensure that the appropriate controls are in place and used);
- dispose of all waste properly.

The training should help workers to understand, among other things, the dangers of working with asbestos, where they may come across it, and how to work safely with it.

Only certain work on asbestos-containing materials can be carried out without a licence. For advice on how to carry out work which does not require a licence, see the task sheets on the HSE website (www.hse.gov.uk/asbestos) or in Asbestos essentials task manual, HSG210.

How do I find out more?

Contact your trade union for more advice on asbestos or go to www.tuc.org.uk/asbestos.

See the HSE website: www.hse.gov.uk/asbestos.

Asbestos essentials task manual: Task guidance sheets for the building maintenance and allied trades HSG210 ISBN 0 717618870 available from HSE Books, PO Box 1999, Sudbury, Suffolk C010 2WA. Tel: 01787 881165, www.hsebooks.co.uk.

SUPERVISION OUTWITH EDUCATIONAL ESTABLISHMENTS

Introduction

The following resolution was approved by the 2005 Annual General Meeting:

"That this AGM instructs Council to draw up comprehensive advice for teachers/lecturers on all activities involving the supervision of pupils/students out with educational establishments."

Advice

In January 2005 comprehensive advice and guidance produced by the Scottish Executive, 'Health and Safety on Educational Excursions: A Good Practice Guide', was brought to the attention of all members and a copy of the guidance documents were sent to all Local Association Secretaries and Branch Secretaries.

Below is advice which reflects EIS policy on supervision out with educational establishments and the contractual requirements for teachers employed by local authorities and lecturers employed by colleges and universities.

Local Association Secretaries should encourage local authorities and Branch Secretaries should encourage colleges to review their existing policies on excursions and visits and ensure that current policy reflects the guidance.

HEALTH AND SAFETY: ADVICE ON EXCURSIONS AND VISITS

Teachers and lecturers are not contractually required to organise or participate in excursions or visits out with school/college premises. However, many teachers/lecturers willingly undertake such activities when there is educational value in doing so.

The requirements under health and safety law (the Health and Safety at Work Act 1974, The Management of Health and Safety at Work Regulations 1999 (as amended) and all other relevant statutory provisions) apply wherever and whenever a teacher/lecturer is at work. Councils/colleges are required to ensure the health and safety of their employees and pupils/students and teachers/lecturers are required to take reasonable care of their own health and safety and the health and safety of their pupils/students.

Teachers/lecturers who take on responsibility for supervising or organising visits should ensure that they:

(1) Comply with the council/college procedures and policies; such policies should include rules for levels of supervision and risk assessments.

(2) If in doubt seek advice from head teacher/line manager/employer's advisers.

(3) Raise any health and safety concern prior to the visit taking place.

It is the employer's responsibility to ensure that suitable and sufficient risk assessments have been carried out by competent person(s) for all work activities including visits or excursions. In December 2004 the Scottish Executive published detailed and comprehensive guidance: 'Health and Safety of Educational Excursions: A Good Practice Guide' which is available at www.scotland.gov.uk. This guidance provides standards for Local Authorities, Adventure Activities and a Handbook for Group Leaders. The Health and Safety Executive's website is also a useful source for advice and information; www.hse.gov.uk/services/education.

If an EIS member has concerns about a health and safety issue related to a visit he/she should try to resolve this with his/her head teacher/line manager. If the concerns are not addressed he/she should cease to volunteer for the trip or activity. In such circumstances it is recommended that advice and support is sought from the Local Association Secretary/Branch Secretary.

WORKING CONDITIONS

Introduction

The following resolution was approved by the 2005 Annual General Meeting:

"That this AGM instructs Council to provide advice to members with regards to appropriate working conditions of temperature, humidity, lighting and ventilation which are conducive to effective teaching and learning."

Environmental Conditions Conducive to Effective Teaching and Learning

This paper outlines the legal requirements for environmental conditions as contained within the Workplace (Health, Safety and Welfare) Regulations 1992 (as amended) and the Approved Code of Practice and Guidance.

Temperature and Humidity

The legal minimum temperature for indoor workplaces is 16°C and employers are required to maintain a reasonable temperature. Temperatures in class rooms should be no less than 17°C, with reference to The School Premises (General Requirements and Standards) (Scotland) Regulations 1967. There is no such thing as a temperature which is 'ideal' for all occupants of a room but it is generally accepted that a temperature of between 20°C and 22°C is suitable for most people engaged in sedentary work. A number of EIS Local Associations/Branches have agreed procedures with the employer which outline the measures that must be taken in situations where classrooms/lecture theatres are below the minimum temperature, such measures include providing additional heating or finding alternative accommodation.

There is no maximum temperature for workplaces. However, employers are required to ensure a reasonable temperature. Some EIS Local Associations have reached agreement on the maximum temperature permitted in classrooms. Such agreements specify the temperature at which measures should be taken to reduce the heat in the room or to find alternative accommodation. Local agreements have been reached which set the maximum temperature for classrooms at 27°C and 28°C. The TUC continue to campaign for a legal maximum temperature of 30°C or 27°C where heavy, physical work takes place.

Members should raise concerns over thermal discomfort with the head of establishment/safety officer and with the EIS Safety Representative. Local procedures for reporting and dealing with inappropriate temperatures should be followed.

Ensuring thermal comfort will also depend on levels of humidity, relative humidity levels between 40% and 60% are within the acceptable range. The ideal levels for relative humidity are between 45% and 55%. Relative humidity is the amount of water vapour in the air compared with the amount of water the air can hold if it was saturated. Working in low humidity environments can cause headaches and sore and dry throats. Low humidity is most likely to be a problem in air conditioned

rooms rather than naturally ventilated ones. High humidity can increase the effects of high temperatures as the body's natural cooling system cannot work effectively, causing increased discomfort. Neither low nor high humidity are conducive to effective teaching and learning.

Measures can be taken to alleviate discomfort and improve humidity and if teachers and pupils continue to suffer the effects from either low or high humidity conditions this should be raised with the head of establishment/health and safety officer. The EIS Safety Representative may also be able to provide advice.

Lighting

Appropriate lighting is essential to both teachers and learners. Employers are required to provide suitable and sufficient lighting. Inadequate lighting can cause headaches, eye strain, fatigue and stress and will have a negative effect on learning. Where possible lighting should be provided by natural light but in all Scottish classrooms artificial light will also be required. Light levels of between 200 and 500 lux (the measurement of light) should be sufficient for all classroom activities.

Inadequate lighting should be reported to the head of establishment/safety officer. If the problem is not resolved advice should be sought from the EIS Safety Representative.

Ventilation

Employers are required to ensure that all workplaces are effectively and suitably ventilated. This may be achieved by either natural ventilation (windows, vents etc) or mechanical ventilation (air conditioning systems) or a combination of both natural and mechanical. The supply of fresh/purified air to any room should not fall below 5 litres per second per person. The effects of insufficient supply of clean air are drowsiness, sore throats, headaches and respiratory difficulties. The effects of inadequate ventilation and poor air quality for asthma sufferers can be even more serious, increasing risks of asthma attacks. For teachers/lecturers sore throats, either caused or exacerbated by poor ventilation, can increase the risk of voice strain. In addition poor ventilation does not allow heat dissipation and contributes to overheating of classrooms in hot weather conditions.

Inadequate ventilation will have a detrimental effect on teaching and learning and if a teacher/lecturer or pupils/students are suffering the effects outlined above or if the class room temperatures are too high the ventilation system/air flow rates should be investigated. Such concerns should be reported to the head of establishment/health and safety officer. If the problem is not resolved advice should be sought from the EIS Safety Representative.

Conclusion

Teachers and lecturers should not endure inappropriate environmental working conditions. Such conditions may have harmful effects to health and well-being and are not conducive to effective teaching or learning.

Thermometers should be provided so temperatures can be measured in every room in which someone works. The measurement of air flow, humidity and light levels require specialist expertise and equipment. The technicalities of measuring air flow, light levels, and humidity have not been covered in this paper and are the responsibility of the employer. The employer should appoint competent persons to carry out investigations, surveys and risk assessments with respect to environmental conditions.

If a teacher/lecturer is working in unacceptable environmental conditions he/she should raise these concerns with his/her employer in accordance with the employer's procedures. The employer should take remedial measures and ensure that workplace conditions meet statutory requirements and provide a suitable working and learning environment.

Environmental working conditions which are not conducive to teaching and learning and those which breach health and safety legislation can be pursued with the employer by the Local Association/Branch. Local Association Secretaries/Branch Secretaries can obtain support and advice from the Area Officer/National Officer.

RISK ASSESSMENT

Background

The AGM in June 2006 passed the following motion:

"That this AGM instruct Council to provide written guidance on risk assessments"

What is Risk Assessment?

The Health and Safety Executive (HSE) define risk assessment:

"A risk assessment is simply a careful examination of what, in your work, could cause harm to people, so that you can weigh up whether you have taken enough precautions or should do more to prevent harm."

HSE Guidance: 'Five steps to risk assessment': www.hse.gov.uk/risk/fivesteps.htm

Within schools and colleges there is a wide range of hazards (ie anything that may cause harm) which must be properly controlled to prevent accidents, injuries and ill health. Risk assessment can look at an area and identify all the hazards, eg technical workroom, or can look at a specific hazard throughout an establishment, eg stress or violence, or can be used in response to a particular incident or accident to ensure that steps are taken to prevent recurrence.

The risk is assessed by consideration of the likelihood that the potential harm will occur and the severity of the possible consequences. The success of a risk assessment is judged on whether or not the risks, following assessment and implementation of measures of prevention, are adequately controlled.

Legal Requirements

It is a legal requirement since 1993 for employers to undertake risk assessments. The current requirements for risk assessment are under the Management of Health and Safety at Work Regulations 1999. This duty is in addition to the duties on an employer under the Health and Safety at Work etc Act 1974. An employer has a duty to ensure the health, safety and welfare of his/her employees.

Where an employer has 5 or more employees the risk assessment must be recorded.

Where an employee's circumstances change the employer should reconsider the risk assessment, in particular where an employee becomes pregnant, develops a disability or returns to work from major surgery. Once an employer has been informed by the employee that she is pregnant a specific risk assessment must be carried out.

The Safety Representatives and Safety Committees Regulations 1977 require employers to consult with trade union safety representatives on matters concerning the health or safety of their members. This requirement includes consultation on the risk assessment process and the outcomes of risk assessment. Safety representatives are entitled to access to risk assessment documents.

The responsibilities for health and safety, including risk assessment, should be set out in the Health and Safety Policy.

The legal responsibility for ensuring that a suitable and sufficient risk assessment has been carried out always remains with the employer.

In schools headteachers are required to manage the health and safety of all within school premises.

Employees also have duties under the Health and Safety at Work Act and under the Management Regulations and are required to look after their own health and safety and that of others and to co-operate with the employer to assist the employer in meeting health and safety requirements.

The Risk Assessment Process

Step 1 is to identify the hazards. This step should include careful consideration of the tasks and working environment. Some hazards, such as noise, asbestos, chemicals, manual handling, ionising radiation, are potentially so dangerous that they are covered by their own regulations and require detailed risk assessment and specified control measures. Such hazards and risk assessments do not need to be repeated in a general risk assessment but they should be reviewed and a general risk assessment should make reference to other assessments and documentation. Hazards can also be identified by reviewing accident/incident reports and occupational ill health records.

Step 2 is to decide who might be harmed and how this may happen. In schools and colleges the employer must consider employees, pupils/students, contractors and employees of other employers (for example, catering staff not directly employed) and visitors.

Step 3 is to evaluate the risks and to decide on the precautions required. This is about looking at what is already in place and attempting to reduce risks to an acceptable level. What is required to be done may be prescribed in regulations, set out in an Approved Code of Practice or provided in HSE Guidance. Where detailed advice is not available the employer must ensure that he/she has done all that is 'reasonably practicable' to reduce the risks. The term 'reasonably practicable' is used frequently in health and safety legislation and means that there must be an evaluation of the level of risk and the resources required to take additional measures to reduce the risk further. It does not mean that an employer can make a decision not to take additional precautions or preventative steps based only on a wish not to spend any more money.

Step 4 requires the findings to be recorded (for employers with 5 or more employees) and, most importantly, implemented. Good practice is for implementation to be allocated to individuals/departments and realistic time scales set. Such timescales will be dependent on the level or risk, particularly if the risk is still high.

Step 5 is the review of the risk assessment. This will be necessitated by changes, eg to the working environment, in circumstances of employees (see above), in equipment or in the tasks being carried out. It is also good practice to have a system of annual review of risk assessments.

Risk assessments should be carried out by a 'competent person', such a person should have been trained in the risk assessment process and have sufficient training and experience of the work and knowledge of health and safety requirements. Where training is required the employer must provide this and it should be conducted in work time.

Principles of Risk Assessment

It is HSE's view that the risk assessment process should be underpinned by its 'Principles of sensible risk management (www.hse.gov.uk/risk/principles.htm) which includes the message to employers that HSE is committed to:

"Ensuring that those who create risks manage them responsibly and understand that failure to manage real risks responsibly is likely to lead to robust action."

Another of the principles sets out that risk management is not about:

"Stopping important recreational and learning activities for individuals where the risks are managed."

The management of risks for educational visits and excursions is a priority area for HSE and it is important that teachers and lecturers are aware of the additional risks

that such activities present and the actions they should take to protect pupils/students, colleagues and themselves.

Assessment of risk is not a science and although risk rating systems (which allocate values to levels of likelihood and consequence and multiply these factors to result in a numerical score) may be used, the results are still a subjective evaluation. However, risk assessment must be undertaken with adherence to legal requirements, compliance with good practice and a systematic application of common sense.

Examples of Risk Assessments

There is no set format for risk assessment documentation. Councils, colleges and universities should have a system for risk assessment in place and this will generally use standardised documentation. Examples of general risk assessments are included in HSE's Guidance 'Five steps to risk assessment'.

An example of a risk assessment in a school setting can be found in HSE's guidance 'Health and safety matter for special educational needs: Legal issues including risk assessment'. HSE makes clear that the risk assessment examples are indicative only.

An example of a specific risk assessment relating to manual handing with special education is found in HSE's guidance 'Health and safety matters for special educational needs: Moving and handling'.

The examples of risk assessments are available at:
www.hse.gov.uk/services/education/information.htm#special

Advice to Members

If you are concerned that the risks in your establishment are not being properly controlled you should raise this with your line manager/headteacher and/or seek advice from the EIS Safety Representative.

The EIS Safety Representative is entitled to ask for access to all risk assessments and this can be useful if there is doubt over the precautions that have been put in place.

Where there is a concern that risks are not being properly managed, eg in the case of a pupil/student with a history of violent behaviour or where there are high levels of stress, the employee/EIS Safety Representative should request that a risk assessment is carried out. Although most risk assessments look at work places or activities other work place hazards, such as the potential for violent incidents and stress, should also be assessed.

If an EIS Safety Representative/member believes that the risk assessment is not suitable or sufficient, due to the risks remaining high or there being other measures which could be taken to reduce risks to an acceptable level, this should be reported

to the employer, via line management/headteacher. If there is not a satisfactory outcome further advice should be sought from the EIS Local Association or Branch.

INDUSTRIAL INJURIES DISABLEMENT BENEFIT

You are entitled to Industrial Injuries Disablement Benefit (IIDB) if you are disabled as a result of an accident at work or from industrial disease or deafness. The level of the benefit is dependent on the extent of the disablement.

Questions & Answers

Q: What level of disability qualifies me for IIDB?

A: IIDB is normally paid if the disability is assessed at 14% or more. For example loss of an index finger or big toe would count as 14% disability. Total loss of sight, hearing or loss of both hands would each count as 100% disability. You will be required to undergo a medical assessment to determine the extent of your disability.

Q: What do I have to do to claim IIDB?

A: Contact your local Jobcentre Plus or Social Security Office and complete the form provided.

Q: When should I make a claim?

A: You can claim when two months have passed since you became disabled as a result of an accident. In the case of industrial disease you can claim immediately.

Q: Will the claim be back dated?

A: Yes. The claim will be back dated but only by one month.

Q: How much will I get from IIDB?

A: The weekly payments range depending on the extent of disability, e.g. from £31.62 - £158.10 (at 2012 rates).

Q: Can I receive IIDB whilst receiving sick pay?

A: Yes. IIDB can be received whilst off sick whether or not you are in receipt of sick pay.

Q: Can I receive IIDB when I return to work?

A: Yes. IIDB is paid on top of any earnings and it is a non-means tested benefit.

Q: Do I pay tax on IIDB?

A: No. It is a tax free benefit.

Q: Will claiming IIDB affect my compensation claim?

A: No. Claiming IIDB will have no effect on your claim.

Q: How can I get further information on IIDB?

Q: How can I get further information on IIDB?

A: For further information contact:
Jobcentre Plus Barrow IIDB Centre
Pittman Way
Preston
PR11 2AB
Tel: 0845 603 1358
Textphone: 0845 608 8551

GUIDANCE ON RISK ASSESSMENT OF VIOLENT AND ABUSIVE BEHAVIOURS

Background

1.1 The AGM in June 2008 passed the following motion:

"This AGM instructs Council to produce guidelines for Local Associations on the use of risk assessment in relation to pupils exhibiting violent or abusive behaviours."

1.2 Information on the legal requirements for risk assessment and EIS guidance on the risk assessment process is provided in the EIS Health and Safety Handbook which is issued to all EIS Safety Representatives and is available on the EIS website. The guidance in this paper is set in the context of this general guidance.

1.3 This motion relates to risk assessment within schools. FELA has produced guidance for colleges and universities on dealing with violence and aggression. However, the FELA guidance does not contain detailed advice on risk assessment and, therefore, it should be supplemented by the advice contained in this paper.

Risk Assessment

2.1 The Health and Safety Executive (HSE) provides a general definition of what a risk assessment is:

"A risk assessment is simply a careful examination of what, in your work, could cause harm to people, so that you can weigh up whether you have taken enough precautions or should do more to prevent harm."

2.2 A risk assessment can also look at a specific hazard or risk in a particular situation. Within schools the risk from violence and abusive behaviours is a significant problem and it is important that such risks are properly assessed. It may not be possible or appropriate to exclude a pupil at the first sign of violent or abusive behaviours, therefore, it is essential that the extent of the risk is properly assessed and suitable control measures, precautions, procedures and training are provided.

2.3 The risk is assessed by consideration of the likelihood that the potential harm will occur and the severity of the possible consequences. The success of a risk assessment is judged on whether or not the risks, following assessment and implementation of measures for prevention, are adequately controlled. To undertake this requirement it is important that the process of risk assessment is rigorous and that staff are consulted at all stages.

Compliance with Legal Requirements

3.1 Under the Health and Safety at Work etc Act 1974 an employer has a duty to ensure the health, safety and welfare of his/her employees. The specific requirements for risk assessment arise from the Management of Health and Safety at Work Regulations 1999. Unfortunately, there has been a lack of appropriate risk assessment with respect to risks from violence and abuse and this is often due to employers claiming a lack of an appropriate model for conducting an assessment. The process outlined in this guidance and the pro-forma provided in Appendix 1, along with the example risk assessment in Appendix 2, provides advice which should assist in overcoming barriers to fulfilment of this legal requirement.

3.2 Where an employer has 5 or more employees the risk assessment must be recorded. The risk assessment formats used for general risks, which may also include the risk of violence from the public or parents, is not always suitable when assessing violent or abusive behaviours from specific children or young people. Appendix 1 provides a practical means of recording the risk assessment.

3.3 Where an employee's circumstances change the employer should reconsider the risk assessment, in particular where an employee becomes pregnant, develops a disability or returns to work from major surgery. This is of particular importance if the teacher is dealing with situations where she/he is at risk from violent and abusive behaviours. Once an employer has been informed by the employee that she is pregnant it is a legal requirement that a specific risk assessment is carried out and that this assessment should consider the risks to the unborn child. The risk assessment should consider all risks including risks from violent and abusive behaviours.

3.4 The Safety Representatives and Safety Committees Regulations 1977 require employers to consult with trade union safety representatives on matters concerning the health or safety of their members. This requirement includes consultation on the risk assessment process and the outcomes of risk assessments. Safety representatives are entitled to access to risk assessment documents. This applies to risk assessments dealing with violent and abusive behaviours.

The Risk Assessment Process

4.1 There are 5 Steps to risk assessment as outlined in the HSE guidance. These steps apply equally to specific risk assessments on violence and abusive behaviours.

4.2 Step 1 is the identification of hazards. Violent and abusive behaviours which may cause injury are hazards. Such hazards can be identified by incident reports where violent or abusive behaviours have been reported and where there has been no injury or following a violent incident where injury has occurred. It is important to be pro-active with identifying this kind of hazard and if a teacher identifies violent and abusive behaviours she/he can request

that a risk assessment is carried out. Following an incident a risk assessment should be carried out before a pupil is returned to class.

4.3 Step 2 requires identification of who might be harmed and how this may happen. In schools the employer must consider employees, pupils and employees of other employers, for example, catering or janitorial staff not directly employed by the Council. In this type of risk assessment it will also be important to identify the causes of and triggers for behaviours.

4.4 Step 3 evaluates the risks and decides on the precautions required. This is about looking at what is already in place and attempting to reduce risks to an acceptable level. What is required to be done in the case of violent and abusive behaviours is not prescribed in regulations and is neither set out in an Approved Code of Practice nor provided in HSE Guidance. There is general guidance on managing violence within the education sector but this does not provide advice on what to do in specific circumstances and with specific violent or abusive behaviours.

The employer must ensure that he/she has done all that is 'reasonably practicable' to reduce the risks. The term 'reasonably practicable' is used frequently in health and safety legislation and means that there must be an evaluation of the level of risk and the resources required to take additional measures to reduce the risk further. It does not mean that an employer can make a decision not to take additional precautions or preventative steps based only on financial cost.

In the case of risks from violent and abusive behaviours there may also be pressure to avoid exclusion and this can influence the decisions and judgements made in the risk assessment. Risk assessment in this area is far from being scientific and it is important that the process involves consultation with the staff who come into contact with the pupil to fully understand their views, observations and perceptions of the level of risk.

4.5 Step 4 requires the findings to be recorded (for employers with 5 or more employees) and, most importantly, implemented. Good practice is for implementation to be allocated to individuals/departments and realistic time scales set. Such timescales will be dependent on the level or risk. There may be measures that need to be put in place before the pupil can return to school.

4.6 Step 5 is the review of the risk assessment. With this type of risk assessment it will be essential to review any measures taken to reduce risk at an early stage, to assess the impact of the additional measures and to assess whether or not the risk is being adequately controlled. Following a review a decision should be made on a future review date. If there is a further violent incident the risk assessment should be reviewed. Where there is a behavioural risk assessment for a pupil and that pupil moves school the existing risk assessment must be reviewed in the light of the new circumstances.

4.7 Risk assessments should be carried out by a 'competent person', who is trained in the risk assessment process and has sufficient experience of the work and knowledge of health and safety requirements. With a risk assessment that is assessing the risk presented by behaviours it would be good practice to have an assessment led by a competent person and also involving experts and practitioners. This is a difficult risk assessment process and a multidisciplinary and consultative approach will assist in producing effective, appropriate and acceptable outcomes. The EIS recommends a team approach to risk assessment with trained assessors leading the process.

4.8 EIS Safety Representatives should be consulted on all such risk assessments and be involved in the process as the outcomes of the assessment will have a direct effect on the safety of members. Risk assessments should be available to all staff at risk and such staff should be informed of both the risks and the specific control measures required to reduce the risks.

EIS Pro-forma

5.1 The pro-forma provided in Appendix 1 may be used or developed by Councils. It is an example of how this specific type of risk assessment can be undertaken and recorded.

5.2 Appendix 2 provides an example of a completed risk assessment. It does not represent a 'model answer' as each risk assessment will be specific to the pupil, environment and situation. This type of risk assessment requires informed judgement by assessors and it is essential that all staff involved are consulted during the assessment process.

Additional Advice

6.1 It is the EIS view that if a teacher has been injured as a result of a violent incident she/he should be given the option not to go back to teaching the pupil responsible, even if the risk assessment process identifies that the risk from that pupil can be controlled.

6.2 The EIS Safety Representative is entitled to access to all risk assessments and this can be useful if there is doubt over the precautions and procedures that have been put in place.

6.3 If an EIS Safety Representative/member believes that the risk assessment is neither suitable nor sufficient, due to the risks remaining high or there being other measures which could be taken to reduce risks to an acceptable level, this should be reported to the employer, via line management/headteacher. In this situation a review of the risk assessment should be carried out.

6.4 All incidents of violence or abuse where there has been an injury, whether physical or psychological, should be reported to the police. If the school or council have not or will not report the incident the Local Association Secretary should advise the injured member to do so. If a report is not made to the police the member may be denied compensation if a claim is made to the Criminal Injuries Compensation Authority.

6.5 The responsibilities and requirements for risk assessments should be set out in a policy on violence, which every Education Department/Council should have in place.

Action

7.1 This advice should be added to the EIS Health and Safety Handbook and be available on the EIS website.

7.2 Local Associations should seek to have the requirement to conduct specific risk assessments in respect of violent and abusive behaviours included in their Council's policy on violence. Some Councils already use specific risk assessments to assess risks from 'Challenging Behaviour', including violent and abusive behaviours. If this is sufficient to deal with the risks a separate system of risk assessment does not need to be established.

7.3 The EIS pro-forma and guidance may be used and adapted by any Council which has not yet developed a system for assessing the risks from violent and abusive behaviours.

Appendix 1

Risk assessment pro-forma for assessing and managing risks of violent and abusive behaviours:

Name of pupil ……

School/Class……

Assessment completed by: ……

Date ……

RISK ASSESSMENT AND MANAGEMENT PROCEDURE	
Identify violent behaviour, eg kicking, biting, punching, running into, hair pulling, throwing objects, spitting, etc.	
What factors contributed to this behaviour? Eg situation, triggers or any special conditions	
Who is likely to be harmed?	
What kinds of harm/injuries are likely to occur?	

Evidence of previous violent behaviours, incidents or actions				
Measures already in place				
Measures required to reduce risk				
Estimate the level of risk, consider combination of likelihood and potential for harm – choose from the 3 adjacent options. Risk estimate: **Risk is ????**		**High** – likely and potential for serious or major injury, eg fractures or multiple injuries	**Medium** – likely and potential for minor injury, eg scratch or bruise	**Low** – possible but unlikely or infrequent and potential for minor injury
Measures to be actioned by:	Timescale for implementation:		Will level of risk be acceptable if measures are implemented?	

Date for Review: …….

Appendix 2

Risk assessment pro-forma for assessing and managing risks of violent and abusive behaviours:

Name of pupil: Pupil Y

School/Class: Hayfield Primary/P4

Assessment completed by: Assessment Team

Date: 4 March 2010

RISK ASSESSMENT AND MANAGEMENT PROCEDURE	
Identify violent behaviour, e.g. kicking, biting, punching, running into, hair pulling, throwing objects, spitting, etc.	Chair throwing, hitting and kicking furniture
What factors contributed to this behaviour? E.g. situation, triggers or any special conditions	Last incident followed his causing disruption with other pupil, shouting at him, and when asked to move seats he started throwing the chair and kicking desk. Incidents becoming more frequent and more uncontrolled.
Who is likely to be harmed?	Staff and pupils
What kinds of harm/injuries are likely to occur?	Bruising and other soft tissue injuries
Evidence of previous violent behaviours, incidents or actions	4th incident in 3 weeks, also numerous incidents of threatening and abusive language to other pupils.
Measures already in place:	Temporary exclusion Meeting with carer re behaviour management
Measures required to reduce risk:	EP Service Referral Support-worker to be provided during lesson time Training for staff in de-escalation techniques Emergency procedure to be put in place. Restraint procedure to be agreed and non-restraint alternative to be determined[1]. Information on procedure to be provided to all relevant staff.

Estimate the level of risk, consider combination of likelihood and potential for harm – choose from the 3 adjacent options. Risk estimate: **Risk is High**	**High** – likely and potential for serious or major injury, eg fractures or multiple injuries	**Medium** – likely and potential for minor injury, eg scratch or bruise	**Low** – possible but unlikely or infrequent and potential for minor injury

Measures to be actioned by:	Timescale for implementation:	Will level of risk be acceptable if measures are implemented?
Education officer to request EP referral and to feedback timescale to school	ASAP	Review of risk assessment to establish effect should be carried out within 2 weeks of all provisions being met.
EO to put forward request for additional resources for full-time support worker	ASAP	
EO to arrange training of all staff involved with Pupil X	Within 1 month	
HT to consult with staff and develop emergency procedure – taking advice from Council specialists	Before return from exclusion	Appropriate emergency procedure should reduce risk to **Medium** but risk should be reduced further

Date for Review: At latest 5 May 2010

Footnote: [1]EIS extant policy is that there can be no requirement for teachers to be trained in physical restraint techniques and the Institute will provide full support to any member pressured by an employer to be trained in physical restraint techniques. Participation in such training is on a voluntary basis.

Guidelines for Pupils Displaying Serous Inappropriate Behaviour and Members Subject to Violence

Introduction

1.1 The following resolution was approved by the 2008 Annual General Meeting:

> "This AGM instructs Council to produce clear guidelines to ensure that, when pupils are displaying serious inappropriate behaviour the care, welfare and right to a safe place of work for the teachers are considered."

1.2 The 2007 Annual General Meeting approved a policy on **Disruptive Pupils.** Policies on **Physical Restraint** (AGM 2004 and AGM 2005) have also been developed.

1.3 The 2009 AGM is also being asked to approve a paper which provides guidance on risk assessment of violent and abusive behaviours.

1.4 This paper does not deal with school pupils placed in further education colleges arising from school–college partnerships. That issue may require consideration by EIS-FELA.

Legal Requirements

2.1 The Health and Safety at Work etc Act 1974 places employers under a duty to ensure, as far as is reasonably practicable, the health, safety and welfare of employees at work.

2.2 The Safety Committee and Safety Representatives Regulations 1977 require employers to inform Safety Representatives in good time on matters related to the health and safety of their members and to consult with them.

Guidelines

3.1 It is essential that each school has its own operating procedure to deal with pupil indiscipline. These procedures should be drawn up in full consultation with staff and should set out both a school definition of what constitutes seriously inappropriate behaviour and what steps can be taken by the class teacher and by others holding promoted posts. There should be consultation with the school's EIS Representative(s) and the EIS Safety Representative(s).

3.2 Within the operating procedure the teacher should be given the right to exercise a professional judgement on the behaviour and the most appropriate means of dealing with the behaviour.

3.3 Operating procedures should be available for all teachers including those who are employed on temporary contracts, eg supply teachers, and students.

3.4 Seriously inappropriate behaviour is behaviour in which a teacher's instructions are challenged, the good order of the class is threatened or disrupted and/or where there is a threat of violence, or actual violence towards the teacher, support staff or pupils. Threats of violence or actual violence should normally lead to exclusion.

3.5 Each school should have a clear mechanism by which teachers can summon assistance from immediate colleagues and from management within the school.

3.6 In the event that order cannot be restored in a classroom and where there is a potential danger to the teacher and other pupils the teacher should consider withdrawing pupils not involved and herself or himself to a safe area.

3.7 The management of the incident requires input from the teacher and from school management. Where there has been a violent incident or a threat of violence, the provision of expert advice set out in Sections 5 and 6 of the Institute Policy Violent Incidents in Schools (AGM 2008) should be applied. These sections are appended to this paper.

3.8 In all circumstances in which seriously inappropriate behaviour occurs, consideration should be given to assessing the risk to the teacher and other pupils through a formal risk assessment. The advice provided by the EIS on violent and abusive behaviours should be followed.

3.9 Where a teacher believes that a Council is unable to provide a safe place of work and that there is a threat to the teacher's physical and psychological wellbeing, the matter should be raised with the Local Association Secretary in the first instance.

Conclusion

4.1 The guidelines set out in 3.1 to 3.9 should be issued to branch representatives.

Appendix A

Members Subject to Violence

5.1 There are a number of steps that a member subject to a violent act, or a threat of violence, should take.

5.2 At the time of the incident help should be sought from colleagues and management. The incident should be reported to management and the victim should ensure that the incident is recorded in the accident book, in a Violent Incident Recording form and reported to the Police. Management can assist by bringing police officers to the workplace to interview the victim and witnesses rather than putting the onus on the victim to report the matter to the Police at the end of the working day in their own time.

5.3 Where appropriate medical assistance should be sought at the time of the incident. It is also appropriate to provide time off with pay to allow the victim to recover from the immediate trauma of the incident.

5.4 Any absence arising from a violent incident should be treated as special leave with full pay. For teachers the absence should be covered by the provisions of the SNCT Handbook (SNCT Handbook, paragraphs 6.22 and 6.23). Where necessary the victim should also be advised of the opportunity to make a phased return to work, for example, reducing working hours or changing the work pattern.

5.5 Incidents of violence should be reported to HSE under RIDDOR in circumstances where the victim has been incapacitated and is absent from work for more than seven consecutive days. In addition, a record of the incident should be recorded by the employer if the victim has been incapacitated for more than three consecutive days.

5.6 Decisions on a return to work should also allow consideration of restricting or altering the normal range of duties and the possibility of a return to a different location.

5.7 The victim should be offered counselling. This counselling should be arranged as close to the incident as practicable. As well as the employer's internal counselling services or access to external services advice can be sought from Victim Support Scotland or Teacher Support Scotland.

5.8 Following a violent incident a risk assessment should be conducted to determine whether the risk of future incidents can be avoided or reduced. Guidance should also be given on contact between the victim and assailant.

Pupils/Students as Assailants

6.1 Where a pupil or student commits an act of violence against a member of staff the pupil or student should be excluded.

6.2 During the period of exclusion there should be full consultation with the staff on the pupil or student's future in the establishment. The views of the victim should be taken into account. Risk assessments should also be carried out.

6.3 In circumstances where a pupil is being returned to the establishment against the wishes of EIS members advice should be sought from the Local Association Secretary or Branch Secretary. The Local Association Secretary or Branch Secretary must raise the matter with the Area Officer. The Local Association Secretary or Branch Secretary will then raise the matter with the employer. The member, or members in a branch, who would prefer to refuse to teach a pupil or student who has been violent may be advised to raise a grievance. If matters cannot be resolved, the Area Officer may seek authorisation from HQ to advise the member(s) to refuse to admit the pupil or student. In such circumstances there may be issues of breach of contract and it is important for members to be aware of the risks and to be clear of EIS support.

6.4 Key recommendations of the *ad hoc* Sub-Committee on Pupil Indiscipline are still relevant for dealing with violence or threats of violence as well as general indiscipline. *Inter alia*, the paper called on Scottish Government and local authorities to ensure sufficient funding for:

- additional support wherever this is needed
- additional staffing for in-school behaviour bases and units
- the provision of additional off site behaviour facilities.

6.5 It is a matter of regret that a sub-group of the Government's Working Group on Pupil Indiscipline looking at off-site provision did not reach a conclusion and the Discipline Stakeholder Group has still to set out its view on this matter. The EIS must continue to campaign for such provision.

Personal Protective Equipment

Background

1.1 The AGM in June 2010 approved the following resolution:

> "This AGM instructs Council to investigate and report on what obligatory Personal Protective Equipment should be provided and maintained to protect teachers from injury and risk of entrapment while using equipment in Technical Departments."

Summary of the requirements of The Personal Protective Equipment Regulations 1992

2.1 Personal Protective Equipment (PPE) is all equipment intended to be worn or held by a person at work which protects him/her against one or more risks to his/her health and safety.

2.2 Where the risk of injury cannot be adequately controlled by other means, for example machinery guarding, an employer must provide employees with suitable personal protective equipment (PPE) to reduce the risk to as low as reasonably practicable.

2.3 An assessment of the suitability of PPE must be carried out.
Such an assessment will need to be reviewed if there is reason to suspect it is no longer valid or there have been significant changes for example, of users, of risks or in working conditions.

2.4 All PPE provided must be suitable and the factors that must be considered in assessing suitability are:

(a) appropriateness for the risks involved and the conditions at the place where exposure to the risk may occur;

(b) the ergonomic requirements and the state of health of the persons who use the PPE, for example if the employee wears glasses prescription eye protection should be provided;

(c) correct fit - to ensure this, employers may have to offer a range of types and sizes of PPE. Wearers should be involved in selection and fitting of PPE;

(d) effectiveness to prevent or adequately control risks without adding new ones; and

(e) compliance with relevant European standards. Under the PPE (Safety) Regulations 1992, personal protective equipment for work which passes specified tests will carry a "CE" mark. This shows that the PPE complies with required standards.

2.5 Employers must ensure that different types of PPE worn together are compatible. Assessments must consider the effectiveness

and comfort of the combination of PPE that is used, and not just individual items of PPE.

2.6 Safety Representatives and PPE users should be involved in the assessment and selection of PPE.

2.7 Employers must ensure that all PPE provided is in good working order and is maintained, cleaned or replaced as appropriate.

2.8 Appropriate accommodation must be provided for PPE when it is not in use to protect from contamination, dirt, loss or damage.

2.2 Employers must provide employees with information, instruction and training that is adequate and appropriate to ensure the correct and effective use of PPE.

2.10 Employers must take all reasonable steps to ensure that employees use properly the equipment provided. It is not enough just to make PPE available to staff.

2.11 Employees must use PPE provided in accordance with training and instructions provided.

2.12 Employees must report to their employers, any loss of or obvious defect in PPE provided for them. There must be arrangements for reporting loss or defects and employees should be informed about these arrangements.

PPE for use in Technical Departments

3.1 The Management of Health and Safety at Work Regulations 1999 requires employers to assess the risks from work activities and to put in place measures to either eliminate the hazards or to control the risk to acceptable levels. A suitable and sufficient risk assessment should be in place for all Technical Departments.

3.2 Equipment used in Technical Departments can generate a number of hazards; these include machinery hazards such as entanglement, cutting, stabbing/puncture, shearing, drawing-in (traps) and friction/abrasion.

3.3 In controlling machinery hazards the Provision and Use of Work Equipment Regulations 1998 requires the risks from dangerous parts of machinery are controlled by provision of machinery guarding/safety devices and, if the risks are still not controlled adequately, by provision of information, training and supervision.

3.4 The risk of other specified hazards, eg ejection of article or substance or rupture or disintegration of parts of the work equipment, should be controlled, so far as is reasonably practicable, by means other than PPE. Suitable eye protection should normally be provided for use at wood or metal working machinery.

3.5 If overalls or dustcoats are provided for protection against chemical splashes or contact with hot surfaces or sparks from welding, the sleeves should be tight fitting so as not to increase the risk of entanglement if using machinery with rotating parts.

3.6 If overalls or dustcoats are provided as PPE (ie to protect against a hazard) they should be cleaned and maintained by the employer.

3.7 Where there is a risk from hazardous substances, for example from wood dust, an assessment should be made under the requirements of the Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH). Respiratory Protective Equipment (RPE) may be required to be provided, as a last resort, to protect the employee. The suitability and selection of RPE comes under the requirements of COSHH and it must be compatible with other PPE worn or used by the employee.

3.8 Gloves may be required for handling of rough material or for when using chemicals (assessed under COSHH) but gloves must not be used whilst operating machinery if this increases the risk of entanglement or drawing-in. The wearing of scarves and loose ties or clothing would also increase the risk of entanglement and must be avoided.

3.9 If a teacher is exposed to high noise levels, through class activities, machining materials or proximity to noisy machinery the requirements of the Noise at Work Regulations 2005 will apply and the employer must, among other measures, provide suitable hearing protection.

Conclusions

4.1 Since PPE identified through the risk assessment process as necessary and suitable will be specific to an activity or use of equipment, there is not a definitive list of obligatory PPE for work in Technical Departments. It is the duty of each employer to comply with the requirements of health and safety legislation and to consult with employees to ensure that suitable PPE is provided and used correctly.

4.2 The range of PPE to be provided to protect teachers/lecturers from the hazards of using equipment in Technical Departments should be identified through the risk assessment process. Following identification of this requirement an assessment of the suitability of the PPE is required by the Personal Protective Equipment Regulations 1992.

4.3 Where PPE is provided the full terms of the Regulations must be complied with and the equipment should be properly maintained.

4.4 Teachers required to use the PPE should be consulted in the selection process and provided with sufficient information and, where necessary, training to be able to use the PPE effectively.

4.5 The Health and Safety at Work Act 1974, Section 9, specifies that employees cannot be charged for anything provided under the requirements of health and safety legislation. PPE must be provided free of charge.

4.6 Further information on health and safety legislation, risk assessment, safety inspections, PPE and rights of safety representatives is available in the EIS Health and Safety Handbook.