The RSI Hazards Handbook

A workers' guide to Repetitive Strain Injuries and how to prevent them.

Tenosynovitis, carpal tunnel syndrome, tendinitis, trigger finger, tennis elbow, and writer's cramp are just some of the work-related musculoskeletal upper limb disorders grouped together as repetitive strain injuries (RSI). RSI affects an estimated 200,000 UK workers a year.

Keyboard workers are suffering an RSI epidemic, but RSI also afflicts manual workers in all kinds of repetitive jobs - food processing, electronics, clothing, cars, packing, cleaning, furniture and many other industries. This handbook covers all types of work where RSI can arise.

Many workers realise too late that they have been disabled, possibly for life. Yet methods for preventing RSI are well known. Equipment and patterns of work have to be designed to fit human beings, instead of the worker being twisted to fit the job.

In many cases workers must take the initiative in ensuring that RSI does not occur in their workplace. This Handbook shows how this can be done.

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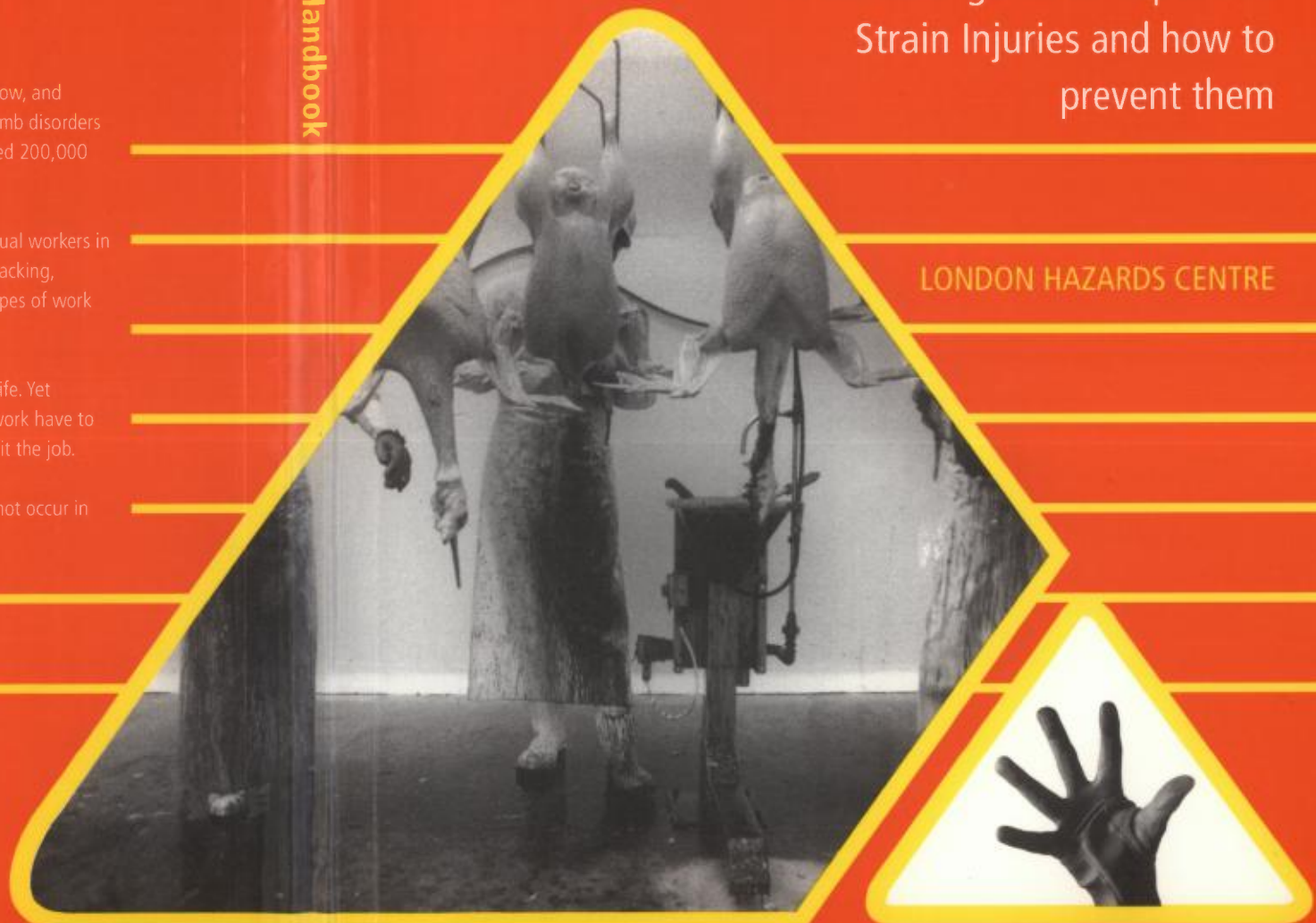

LONDON HAZARDS CENTRE

A London Hazards Centre Handbook

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ABOUT THE LONDON HAZARDS CENTRE

Advice service

The London Hazards Centre provides a free advice and information service on occupational and environmental hazards to workplace and community groups in London. We aim to help those Londoners who do not have access to commercial or academic resources. We give priority to those with the most dangerous living or working conditions.

Information resources

The Centre's library contains information from workplace and campaign groups, as well as official and scientific publications. We receive bulletins from health and safety organisations all over the world. The collection is backed up by our computerised catalogue *HAZLIT* (accessible via e-mail) and by major technical databases in easy-to-use compact disk form. The library has been designated a WHO *Practical Information Centre* under the International Programme on Chemical Safety.

Research and briefing service

We offer a research and briefing service to trade unions, local authorities, solicitors, journalists, media researchers and others working to combat hazardous working and living conditions.

Training

We offer training on basic health and safety law, procedures and good practice. We cover general health and safety, the control and substitution of hazardous substances, asbestos, VDUs and RSI, safety representatives' rights, violence at work, stress, and lifting and handling.

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The book is primarily aimed at union and employee safety representatives, but hopefully it will be of interest to everyone else engaged in preventing RSI or in coping with its consequences. It is not a scientific paper, nor does it aspire to make definitive statements on the legal and medical controversies, but it is a practical handbook for workers who have to deal with RSI on a day to day basis. Our objective in publishing it will be met if it stimulates preventive action at work.

Hugh MacGrillen
London Hazards Centre
November 1996

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INTRODUCTION

In 1988, the London Hazards Centre published *Repetition Strain Injury — Hidden Harm from Overuse*. This followed overwhelming evidence, revealed in a questionnaire distributed with our first handbook on VDU hazards, that repetitive strain injuries (RSI) were a significant problem. The booklet met a clear need and sold out in two editions. Since 1988 there have been many developments creating the requirement for a new handbook on RSI which updates our earlier guidance and takes account of these developments. These can be summarised as follows:

economic developments — Increasing globalisation and the economic policies of successive Tory governments have resulted in rationalisations, redundancies and high levels of job insecurity. The pressures on those fortunate enough still to be in employment are enormous but they are so fearful for their jobs that they are afraid to complain when excessive workloads start to make them ill. A survey carried out by the Sheffield Occupational Health Project, for example, found that in one engineering company alone, 45 percent of those responding said that they regularly took painkilling drugs in order to keep on working.

political developments — The Tory government's drive for more and more deregulation and their massive cuts in the resources available to the health and safety enforcing authorities have made it easier for bad employers to get away with breaking health and safety law. Furthermore, Jenny Bacon, the Health and Safety Executive's Director General has announced that HSE's enforcement policy for the future is for self-regulation by employers and that preventive inspections are to be cut by a third. Health and safety at work has been threatened even further by the Tories' concerted attack on the trade union movement and the removal of whole areas of fundamental employment

rights, which has made many workers reluctant to take action through their trade unions to protect themselves.

evidence that RSI is a continuing problem — A number of surveys, including the government's own Labour Force Survey, have revealed that musculoskeletal disorders, including RSI, are now the largest category of work-related ill-health. Over 200,000 people each year take time off because of RSI and the TUC estimates that at least as many again are suffering in silence and working through the pain. A recent study has suggested that the true costs of RSI may be two or three times the actual compensation costs and that hidden costs include lower work performance and decreased motivation of RSI sufferers. The TUC have estimated, on the basis of official data, that RSI now costs £96 million in lost income for sufferers, £65 million in benefits to sufferers, £343 million in loss of amenity, adaptations and NHS treatment, £278 million in lost production because of time off, £135 million in lost production because of reduction in efficiency and £88 million in employers' insurance, sickness absence and recruiting and retraining costs.

increasing awareness of RSI — Public awareness of RSI has grown considerably over the last few years, helped by some well publicised legal cases, by information campaigns run by the Hazards Centres, the TUC, trade unions and the HSE and by the work of support groups such as the RSI Association. Employees now have greater expectations that something will be done to reduce the incidence of RSI.

developments in the treatment of RSI — RSI sufferers are reporting that new specialised physiotherapy techniques, developed in Australia, appear to be very effective in the treatment of RSI. Other holistic approaches based on Australian experience and involving physiotherapy and psychology are also reported to be producing positive results, particularly in chronic cases.

developments in health and safety law — New health and safety legislation deriving from European Directives has placed a much clearer obligation on employers to assess the risks of work activities which can cause RSI and implement measures to prevent or minimise them.

developments in case law — There have been a number of important legal cases on RSI and sufferers have won substantial settlements both in and out of court. Employers are facing increased pressure from insurers to take steps to prevent RSI or be charged higher premiums.

Hidden harm from overuse — the misery of RSI

Every year thousands of workers suffer RSI as a result of their work. Many become permanently disabled, no longer able to perform simple everyday tasks. Around 40 per cent lose their jobs because they can no longer do the work they were employed to do. Because their injuries are usually invisible their condition is often not believed. They may be labelled hysterical, particularly if they are women, or inadequate individuals whose pain is all in the mind. Or they may be accused of being malingerers, whereas all the evidence shows that RSI sufferers are more likely to be hard working over-achievers.

Many of the sufferers are women, who tend to be concentrated in the sorts of job that carry a risk of RSI. They often work in repetitive jobs, on long shifts and on piece rates. They are rather less likely to be in a union and are more likely to allow themselves to be put upon without complaining. They may be the sole earner in the household and so dependent on the job however bad the conditions. Women workers are also less likely to be able to rest once they return home from work. However many articles there may be in politically correct journals about new men, the reality is that it is still women who bear the burden of housework.

The London Hazards Centre hears many tragic stories about the misery RSI brings to people's lives. One concerns a woman keyboard worker in a small non-unionised workplace who was required to work at a rate of 17,000 key depressions per hour. She developed severe pains in her arms, hands and wrists and was eventually diagnosed as having a frozen shoulder and tennis elbow. This woman is profoundly deaf and relies on signing to communicate. Her condition is so bad that it has become too painful to manipulate her hands and fingers to sign so she is now totally unable to communicate with family and friends.

Many sufferers have described their lives full of pain and the radical changes they have had to make to their daily routines in order to cope. Typically, after a sleepless night, sufferers face problems from the moment they get up — how to turn on the taps, to wash, to grip a toothbrush and clean their teeth, to comb their hair, to put on and fasten their clothes without causing pain. Pride in their appearance has to take second place to comfort — with short easy-care hairstyles and loose elasticated clothing. Pride in one's home also becomes a thing of the past, with daily cleaning routines giving way to weekly or monthly routines. Putting clothes into the washing machine may be manageable, but manipulating the controls, hanging up wet and heavy washing on the line, gripping and pinching clothes pegs cannot be managed without pain. Tableware has to be replaced by plastic as the inability to grip things firmly means increasing breakages of precious crockery and glassware. Sufferers are always on the lookout for aids and gadgets to help them carry out the most simple household tasks. Meals may be inadequate or skipped altogether when the sufferer is in too much pain to prepare them for themselves. 'One day I had to resort to calling in a neighbour to make me a sandwich,' said one sufferer. Picking up, cuddling or bathing their baby are tasks which are impossible or too risky to perform and many parents have described the heartbreak that this has caused. Even pleasure in the family pet may be denied. 'I couldn't even stroke my cat without my hands hurting,' revealed another sufferer, sadly. Hobbies which could provide a welcome distraction from the pain may also have to be abandoned because they involve using the affected part.

To all this physical pain is added further psychological distress: anxiety about the future and whether they will lose their job; financial worries if they are unable to work; guilt at having to rely on family, friends and neighbours to do so many of the tasks that they can no longer perform; the trauma of being passed around the medical profession without getting a proper diagnosis or without being believed; or the stress of trying to win compensation for the injury that has been caused them.

About this handbook

Employers who do nothing to prevent their employees from developing RSI and who allow them to suffer are breaking the law. Health and safety

legislation places legal duties on employers to carry out risk assessments of RSI in their organisations and implement measures to prevent RSI. However, a survey carried out by the Labour Research Department (LRD) in 1996 found that only 58 per cent of employers in organisations where cases of RSI had been found had carried out risk assessments under the relevant health and safety legislation.

Health and safety law now requires almost all employers, as a standard approach, to identify the hazards in their workplace, to assess the risks to employees and to implement measures to prevent or control those risks. This handbook begins by describing in more detail those legal requirements as they apply to RSI. The chapters which follow will look at identifying the hazard (what is RSI and what are the symptoms?), assessing the risks (why does RSI occur and who is at risk?) and preventing or controlling the risks (preventing RSI — what employers must do). Other chapters will deal with trade union action in the workplace and what safety representatives can do, diagnosis and treatment, what compensation is available and what action sufferers can take. Future campaigning priorities are also included.

Although we hope that the handbook will provide useful information for those unfortunate enough to be suffering RSI already, the emphasis throughout the book is on prevention. We have aimed to provide practical information to empower workers to organise and take action in their own workplace to ensure that their employer makes it RSI-free.

2

THE PRINCIPLE OF RISK ASSESSMENT

HEALTH AND SAFETY LAW

The Health and Safety at Work Act 1974 places a general duty on employers to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all their employees. This duty has been reinforced by more recent legislation which places a much more explicit duty on employers to assess and remove risks in their workplace.

The European Framework Directive and the five sibling directives which were adopted at the same time were implemented in the UK at the beginning of 1993 as the set of regulations commonly known as the 'six-pack'. These were:

The Management of Health and Safety at Work Regulations 1992

The Manual Handling Operations Regulations 1992

The Health and Safety (Display Screen Equipment) Regulations 1992

The Provision and Use of Work Equipment Regulations 1992

The Workplace (Health, Safety and Welfare) Regulations 1992

The Personal Protective Equipment at Work Regulations 1992

All these regulations are relevant to the prevention of RSI and employers must comply with their requirements. The key lies in the Management of Health and Safety at Work Regulations. As their title suggests, health and safety must be managed and health and safety risks must be managed out of the workplace. Briefly, the regulations require employers to:

- make a suitable and sufficient assessment of the risks to the health and safety of their employees, identifying the measures needed to minimise them (Regulation 3)

- make health and safety arrangements for the effective planning, organisation, control, monitoring and review of preventive and protective measures (Regulation 4)
- provide health surveillance where appropriate (Regulation 5)
- appoint competent person(s) to assist them in complying with their duties (Regulation 6)
- establish procedures for dealing with serious and imminent danger (Regulation 7)
- provide comprehensible and relevant information to employees (Regulation 8)
- provide adequate health and safety training to employees on recruitment and on exposure to new or increased risks because of a change in work responsibilities or the introduction of new equipment, new technology or new systems of work (Regulation 11)

The suitable and sufficient risk assessment is the cornerstone and it is essential that employers get that right as everything else flows from it.

A summary of the relevant requirements of the other five sets of regulations is contained in the box.

The principle of risk assessment

Risk assessment is the process of determining what hazards exist in the workplace and the risk or likelihood that those hazards will cause harm to people. It is part of a systematic approach to health and safety. It is a duty which is placed on employers but workers and their representatives should be consulted on how it is carried out and their knowledge of the job incorporated into the assessments. They should also be provided with the results. To be suitable and sufficient risk assessments must look at all aspects of the work activity, address what actually happens during the work activity, take into account all those who could be affected, look at work organisation and so on. The purpose of the risk assessment is to enable the employer to identify and prioritise the preventive and control measures needed.

RSI is a serious health and safety hazard to which employers must apply the principles of risk assessment like any other. This means they must take a systematic, step by step approach to:

- identify the hazard
- assess the risk
- implement measures to prevent or control the risk
- adapt the work to the individual concerned
- evaluate the effectiveness of the measures taken
- review the assessment

Health and safety law lays down the minimum standards that employers must achieve, not the maximum ones. It is vitiated by poor enforcement and in any case, there are few absolute requirements: there are usually some qualifying clauses that employers can rely on. The best way to ensure compliance with the law, and to improve upon the minimum legal requirements, is for workers to establish their own strong organisations.

Key requirements of remaining six-pack regulations

Manual Handling Operations Regulations

Regulation 4 of these regulations requires employers to:

- avoid the need for employees to undertake any manual handling operations at work which involve a risk of their being injured
- where manual handling cannot be avoided
- make a suitable and sufficient assessment of the manual handling task to be undertaken
- take appropriate steps to reduce the risk of injury to employees

In the context of the regulations manual handling means any transporting or supporting of a load, including lifting, putting down, pushing, pulling, carrying or moving it, by hand or bodily force. Injury means injury to any part of the body and not just the back.

The employer has to assess the task involved, the load itself, the environment in which the task is being carried out and the capabilities of the person concerned.

Health and Safety (Display Screen Equipment) Regulations
Under these regulations employers must:

- make a suitable and sufficient analysis of workstations and assess the health and safety risks (Reg 2)
- reduce the risks identified (Reg 2)
- ensure that workstations meet standards laid down (Reg 3)
- plan activities so that DSE work is interrupted by breaks or changes in activity which reduce the DSE workload (Reg 4)
- provide employees with an eye and eyesight test and corrective glasses (Reg 5)
- provide health and safety training (Reg 6)
- provide health and safety information (Reg 7)

The risks to health which employers must assess are described as musculoskeletal and postural problems, visual problems, fatigue and mental stress.

Provision and Use of Work Equipment Regulations
Regulation 5 of these regulations is the most relevant, under it employers must:

- ensure that work equipment is suitable for the purpose for which it is to be used
- in selecting work equipment, have regard to the risks to health and safety
- ensure that work equipment is used only for operations and conditions for which it is suitable

Regulations 8 and 9 require employers to provide information, instruction and training to employees about how to use equipment safely.

Guidance to the regulations emphasises that the risk assessments made under the Management of Health and Safety at Work Regulations will help employers select suitable work equipment.

Workplace (Health, Safety and Welfare) Regulations
These regulations apply to all aspects of the work environment and employers have duties to provide:

- effective ventilation (Reg 6)
- a reasonable temperature (Reg 7)
- suitable and sufficient lighting (Reg 8)
- sufficient space (Reg 10)
- workstations and seating suitable for the person using them and for the work being done (Reg 11)
- suitable and sufficient rest facilities (Reg 25)

Personal Protective Equipment (PPE) at Work Regulations
These regulations cover the provision of PPE to employees. Under Regulation 4 employers must provide suitable PPE where health and safety risks cannot be controlled adequately by other means. PPE will not be suitable unless:

- it is appropriate to the risks involved
- it takes account of ergonomic requirements and the health of the individual
- it fits the wearer correctly
- it prevents the risk without increasing the overall risk

Wearing PPE can affect a person's ability to carry out certain tasks so it is relevant when RSI risks are being considered.

3

IDENTIFYING THE HAZARD — WHAT IS RSI AND WHAT ARE THE SYMPTOMS?

WHAT IS RSI?

Repetitive Strain Injury (RSI) is an umbrella term used to describe a range of painful conditions which affect the musculoskeletal system, ie the tendons, tendon sheaths, muscles, joints and nerves, and which are associated with repetitive movements and other forms of overuse. A fuller definition is provided by the Australian National Occupational Health and Safety Commission, as follows:

> **RSI ... is a collective term for a range of conditions characterised by discomfort or persistent pain in muscles, tendons and other soft tissues, with or without physical manifestations. RSI is usually caused or aggravated by work and is associated with repetitive movement, sustained or constrained postures and/or forceful movements. Psychosocial factors, including stress in the working environment, may be important in the development of RSI. Some conditions which fall within the scope of RSI are well defined and understood medically, but many are not, and the basis for their cause and development is yet to be determined. It occurs amongst workers performing tasks involving either frequent repetitive and/or forceful movements of the limbs or the maintenance of fixed postures for prolonged periods.**

To add confusion, there are a number of alternative umbrella terms in common usage, such as Work-Related Upper Limb Disorder (WRULD), Occupational Overuse Syndrome (OOS), Cumulative Trauma Disorder (CTD) and Occupational Cervicobrachial Disorder (OCD). None describes the disorder

fully or perfectly and the proliferation of terminology reflects the difficulty people have in finding a satisfactory explanation for the condition. OOS is the term generally used in Australia, CTD in the USA, OCD in Japan and WRULD or RSI in the UK. The London Hazards Centre continues to use RSI, even though the description is limited to one risk factor, since this is the term in popular usage and is generally recognised.

Our musculoskeletal system consists of muscles, bones, tendons and ligaments. The system also includes nerves running to and from the brain. Our bones are held together by ligaments and our muscles are connected to our bones by tendons. Body movements are produced by the contraction and relaxation of muscles. Tendons do not stretch or contract but transfer force from the muscles to the bones. When a muscle contracts it becomes shorter, pulling on the tendons and allowing our joints and limbs to move. Tendons are smooth and slippery, so that they can glide easily inside the tubes that surround them known as synovial sheaths. These contain a lubricating fluid, synovial fluid, which enables the tendon to move within its sheath without friction. Where a ligament may be subject to particular friction, for example at the shoulder, elbow or knee, a small, fluid-filled sac called a bursa helps reduce the friction.

Although the musculoskeletal system can withstand many stresses and strains upon it, it is not invulnerable. Damage can occur to any part of the system and cause pain. Although our bodies can repair themselves, they need time to do this. When people suffer sports injuries, they usually rest the injured part and allow it time to recover. However, if the injury is work related, people often feel under pressure to carry on. Not only do they not give the injured part the chance to recover but they often continue to perform the work activities which caused the problem in the first place.

The term RSI covers a number of different conditions affecting the musculoskeletal system although there is disagreement amongst the medical profession about what should be included under this general definition. However, it is now generally accepted that RSI falls into two broad categories, although these may overlap. These are:

- ▲ localised conditions
- ▲ diffuse conditions

Some of the most common localised conditions are:

- tenosynovitis
- tendinitis
- epicondylitis
- bursitis
- carpal tunnel syndrome

A more detailed list is contained in Table 1, which also describes the nature of the condition and its symptoms more fully. Localised conditions have a specific medical name, are better understood and can be diagnosed relatively easily on examination. They are usually confined to one part of the body and the symptoms are experienced in that area only. Inflammation may be present. The conditions can be grouped as follows: those involving inflammation of the muscles, muscle-tendon junctions or associated tissue (eg tenosynovitis); those involving inflammation of the tissues of the hand, elbow or knee (eg beat conditions such as bursitis); those involving compression of the nerve (eg carpal tunnel syndrome); and those involving fatigue of muscles because of excessive load or awkward posture.

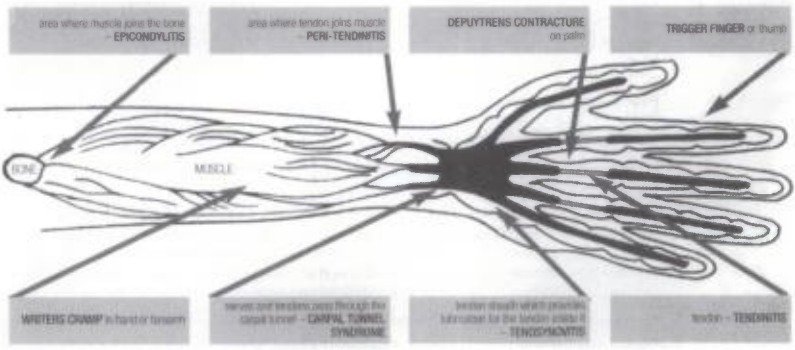

Diagram of a forearm showing sites where RSI can develop *Workers Health Centre, New South Wales, Australia*

Table 1: Localised RSI conditions

Condition	Symptoms	Typical Causes
Bursitis Inflammation of soft tissue between skin and bone or bone and tendon at knee, elbow, shoulder	Pain and swelling at site of injury	Kneeling, pressure at elbow, forceful movement, repetitive movement
Carpal tunnel syndrome Pressure on the nerves passing through wrist	Tingling, pain, numbness in fingers and thumb, especially at night, weakness in hand	Repetitive work with a bent wrist, use of vibrating tools
Cellulitis Infection of palm of hand following repeated bruising	Pain and swelling of palm	Use of hand tools eg hammers and shovels, together with abrasion from dirt or dust
Cervical spondylitis Inflammation of discs and synovial joints in neck and shoulder	Extreme pain in neck, possible referred pain in other parts of body if nerve trapped	Awkward postures, repetitive twisting of neck and shoulder
Dupuytren's contracture Thickening of tissue under palm of hand causing fingers to curl up	Occasional burning pain and development of palmar nodules, gradual inability to extend fourth and fifth fingers	Vibration and manual handling, may be hereditary

Epicondylitis		
Inflammation of area where bone and tendon join, may be called 'tennis elbow' when it occurs at elbow	Pain and swelling at site of injury	Repetitive, often forceful work
Ganglion		
A cyst at a joint or in tendon sheath, usually on back of hand or wrist	Hard, small swelling, usually painless	Repetitive hand movement
Osteoarthritis		
Damage to joints, resulting in scarring at joint and the growth of excess bone	Stiffness and aching in the spine, neck and other related joints	Long term overloading of spine and other joints
Peritendinitis		
Inflammation of muscle-tendon junction and surrounding tissue	Swelling, pain in wrist and forearm	Repetitive movements plus force to move heavy weights
Rotator cuff syndrome		
Inflammation of muscles and tendons in shoulder	Pain, loss of mobility in shoulder, with referred pain further down arm if nerves trapped	Repetitive use of shoulder
Tendinitis		
Inflammation of tendon. May lead to tendons locking in the sheaths so that fingers, hands or arms cannot move easily	Pain, swelling, tenderness and redness of hand, wrist or forearm, difficulty in using hand	Repetitive movements

Tenosynovitis		
Inflammation of tendon sheath	Aching, tenderness, numbness, sometimes with a crackling sound in wrist (crepitus), developing into extreme pain spreading to neck and shoulders	Repetitive movements of wrist, may be associated with sudden increase in workload
Tension neck or shoulder		
Inflammation of muscles in neck and shoulder	Localised pain in neck or shoulder	Maintaining rigid, awkward posture
Trigger finger or thumb		
Inflammation of tendons and/or tendon sheaths of fingers or thumb	Inability to move fingers or thumb smoothly, locking of affected digit, with or without pain	Repetitive movements with repeated or prolonged gripping or pinching

Diffuse conditions are less localised, spread through areas of the body, much less well understood and hard to diagnose. They are characterised by pain, muscle discomfort, burning and tingling sensations. Because the symptoms are diffuse it may be difficult to identify the site of the problem. They are sometimes described as RSI of obscure pathology.

The two conditions may often overlap, with diffuse muscle discomfort existing alongside a localised condition. Also it should be noted that pain can be referred elsewhere, for example, the symptoms of a shoulder problem may be a pain in the arm, and pains in the hand and fingers may be symptoms of a neck problem. This is because of the way the muscles and nerves are arranged in the upper part of the body.

WHAT ARE THE SYMPTOMS?

Some of the commonly reported symptoms of RSI are:

- pain
- tenderness
- burning sensation
- pins and needles
- crepitus (a crackling feeling when tendons are pressed)
- loss of sensation (numbness)
- sensation of cold
- swelling
- ganglion (cyst-like swelling)
- muscle weakness
- muscle spasm
- joint restriction/loss of movement
- loss of grip

Not all sufferers experience all these symptoms and they do not necessarily appear in any particular order. They can occur at any stage in the development of RSI and there may be a delay between doing an activity and experiencing the symptoms. Often there are no visible signs at all.

RSI is a progressive condition which can be divided into three broad stages although the symptoms experienced by sufferers do not always fit this tidy scheme:

Stage one (mild) Pain, aching and tiredness of the wrists, arms, shoulders, neck or legs during work, which improves overnight. This stage may last weeks or months, but is reversible

Stage two (moderate) Recurrent pain, aching and tiredness occur earlier in the working day, persist at night and may disturb sleep. Physical signs may be visible, such as swelling of the tendon areas. This stage may last several months

Stage three (severe) Pain, aching, weakness and fatigue are experienced even when person is resting completely. Sleep is often disturbed and the sufferer

may be unable to carry out even light tasks at home or work. This stage may last for months or years. Sometimes it is irreversible and the person never gets back full use of the affected part of their body

This demonstrates the need to recognise the symptoms of RSI early so that remedial action can be taken when the condition is at the mild stage and can be reversed.

Stage one is virtually impossible to distinguish from aches and pain arising from fatigue and may continue for weeks or months. However, the transition to stage three can take place within weeks and sufferers can be in extreme pain or incapacitated for months or years. It is therefore vital to take all symptoms seriously and take prompt action.

> **'If only I'd realised the long term implications of RSI when I first experienced pains in my hands. But the symptoms were only slight at first and didn't stop me doing things.' (Secretary sacked because she was incapacitated by RSI, and still in pain and unable to work three and a half years later, speaking to a London Hazards Centre advice worker).**

4

ASSESSING THE RISKS — WHY DOES RSI OCCUR AND WHO IS AT RISK?

WHY DOES RSI OCCUR?

RSI is not a new phenomenon. It was identified as long ago as 1713 by Ramazzini, an Italian doctor generally regarded as the father of occupational medicine, who recognised that serious disease could be caused by 'violent and irregular motions and unnatural postures of the body'. Ramazzini described symptoms of RSI in scribes and clerks, noting that the 'incessant driving of the pen over paper causes intense fatigue of the hand and the whole arm because of the continuous strain of the muscles and tendons.' In the 19th century the condition was recorded amongst artists, musicians, seamstresses, milkmaids and smiths. And a whole range of popular terms exist to describe musculoskeletal problems associated with particular occupations: telegraphist's cramp, hop picker's gout, fisherwoman's finger, upholsterer's hand, gamekeeper's thumb, cotton-twister's hand, tennis elbow and, more recently, pizza-cutter's wrist and Nintendonitis.

So RSI has been with us for centuries and many of the risk factors are well established. RSI continues to be the subject of many research studies and recent studies have demonstrated the importance of psychosocial factors in the development of RSI. The main risk factors can be summarised as follows:

- repetitive actions
- forceful movements
- static loading of muscles
- awkward postures
- gripping and twisting

- poor work organisation, including payment systems
- stress
- cold
- vibration

Repetitive work

Jobs requiring highly repetitive motions with short cycles require greater muscular effort and consequently more time for the muscles to recover. Jobs that are paced by machine, for example those on an assembly line, put workers at increased risk of RSI.

Payment by results and similar bonus schemes that put workers under pressure to work even faster will mean that they are working their muscles and tendons even harder and are at even greater risk. They are also under greater mental stress.

Electronic components worker at GEC Marconi. The work involves rapid repetition in an awkward posture *Jenny Matthews/Format*

Forceful movements

Tasks which place a high load or pressure on the muscles will put greater strain on the muscles and tendons which will become fatigued much more

quickly. In addition, poor design of the tool, workplace or task will mean that the worker has to exert excessive force to overcome resistance. If force is applied with the body in a static or awkward posture, the risk will be even greater.

Static or awkward postures

Posture plays a significant role in the development of RSI. Where workers have to adopt a static or awkward posture for long periods, the joints and muscles are put under severe pressure. Awkward postures include those which overload the muscles and tendons in an uneven way and those where a static posture is being held at the extreme of the range of movement, for example, with the arms outstretched or above the head, or with wrists bent to the maximum angle, or where the worker has to reach behind his shoulder repeatedly.

Gripping and twisting

Forceful gripping, pinching and clothes-wringing actions can increase the risk of RSI. And constant gripping or pressure on a particular part of the hand, for example a tool pressed against the palm of the hand, can lead to problems in that area.

Poor work organisation

A number of organisational factors are involved in the development of RSI. For example, production lines where workers have a low level of control over the work rate, piece rate payment systems or payment by results systems which make earnings dependent on workers achieving excessive work rates, bonus systems which make people overwork themselves, insufficient breaks for rest and recovery, jobs with little variety, and lack of information, instruction and training. Organisational deficiencies which place additional stress on workers such as poor work relationships, lack of consultation, no worker participation in decisions which affect them, job insecurity, and an authoritarian management style can all increase the risk of RSI.

Stress

Although the role of stress is not fully understood, it plays an important part in the development of RSI. It is quite clear that workers under stress are more tense and excessive tension in the muscles is a risk factor for RSI. However, it is important to note that the fact that mental stress may be involved does not mean that RSI is all in the mind as some people try to insist.

Cold

Working in a cold environment or handling cold products such as chilled or frozen foods is an additional risk factor in the development of RSI. Wearing gloves increases the amount of effort needed by the muscles to perform certain tasks such as gripping and can therefore be an added risk factor for RSI.

Vibration

Exposure to vibration is a further risk factor. For example, the use of vibrating tools, particularly where they are used for repetitive and forceful tasks, is known to be associated with carpal tunnel syndrome.

WHO IS AT RISK?

Anyone doing a job which exposes them to the risk factors described above is potentially at risk of developing RSI. Women and black workers are at greater risk because they are disproportionately represented in the types of routine, repetitive jobs which are associated with RSI. They have less control over their job and are often concentrated in small, non-unionised workplaces where there is less possibility of achieving change.

Many studies have been carried out to identify occupations at particular risk of RSI. A comprehensive review of such studies is contained in *Work related musculoskeletal disorders (WMSDs): A reference book for prevention*, by Hagberg, Silverstein et al.

Table 2 gives some examples of the types of job that may lead to RSI, although any badly designed job may cause the problem.

Table 2: Jobs with risk of RSI

Manufacturing	Electronics assembly workers	Welders
	Car assembly workers	Scissors makers
	Panel beaters	Shoe assembly workers
	White goods assembly workers	Lamp assembly workers
	Packaging workers	Brick and tile makers
	Staple-gun operators	Ceramics workers
Food processing	Poultry workers	Sausage makers
	Cannery workers	Meat cutters
	Biscuit packers	Cake decorators
Furniture	Upholsterers	Staple gun operators
	Pneumatic nailers	
Clothing	Cloth cutters	Yarn processors
	Manual sewers	Sewing machine operators
	Pressers	Homeworkers
Construction	Bricklayers	Carpenters/joiners
	Manual labourers	Sanders
	Painters	Floor layers
Agriculture	Shearers	Chain saw operators
	Fencers	
Transport	Bus drivers	Freight handlers
	Lorry drivers	
Retailing	Checkout operators	Butchers
	Shelf stackers	Trolley collectors
	Cashiers	

Offices	VDU operators Keyboard operators	Filing clerks Data entry workers
Health services	Cytology screeners Laboratory workers Ambulance workers	Chiropodists Chemotherapy nurses
Services	Cleaners Polishers Postal workers	Hairdressers Carpet layers Sign language interpreters
Entertainment	Musicians Dancers	Music teachers

Assessing whether there is a risk of RSI in the workplace

Employers are required to examine their own organisation and assess whether employees are likely to be at risk of RSI because of the jobs they do and because of any organisational factors. The Health and Safety Executive has produced various checklists that can help them do this. Other checklists are contained in the publications listed at the end of this handbook. The following questions are taken from the HSE leaflet, *Upper Limb Disorders: Assessing the Risks*.

Are there any factors in the job that make upper limb disorders likely, such as:

1, need for a lot of force?

Does the job involve:

- strong force at the same time as awkward movements or posture, eg bent wrists, work with arms raised or fully extended?
- forceful use of hand/forearm muscles?
- forcing ill-fitting components into place?
- tools which are not ideal for repetitive or frequent use, particularly if squeezing, twisting or hammering actions are required
- using equipment designed for a larger or stronger person (eg women using tools designed for men)?

2, Rapid, awkward or frequent movement

Does the job involve:
- machine pacing eg to keep up with a conveyor?
- frequent repetition of the same small number of movements?
- awkward movements such as twisting or rotation of wrist, movement of wrist from side to side, very bent fingers and wrist, or hand or arm movements beyond a comfortable range?
- pressures on employees to work fast, eg from piecework or bonus systems?

3, Awkward or static posture

Does the job involve:
- cramped body position and/or not enough space to change posture?
- arms stretched or overhead for long periods?
- work at awkwardly high or low height (crouching, stooping or reaching up)?
- poor posture for any other reason?

4, Work for long periods without breaks or changes in activity

Does the job involve:
- no changes to work routine or variation of tasks?
- no breaks or infrequent breaks?
- worker not able to have short pauses when desired?

5, No special arrangements for new employees or those returning from a long break

Does the job involve:
- people having to work at full pace immediately they start or resume the job?
- no training in the risk of upper limb disorders and ways employees can reduce risks?

6, Poor environmental conditions

Is the work carried out:
- in dim light, shadow or flickering light?

- in cold or other adverse conditions?
- with tools that vibrate?

Employers should carry out an audit of the jobs and work processes in their organisation using this type of checklist to help them. There are a number of other tools available for employers to audit the jobs in their organisation. One of these is the rapid upper limb assessment (RULA), a simple tool for looking at the physical aspects of the job, developed by McAtamney and Corlett of Nottingham University. It uses a stage by stage approach to assess the posture in different parts of the body and the scores give a risk rating which can be used to determine the preventive action needed. The system has been tested and validated and people can be taught very easily to use it. It is set out in the self-assessment guide, *How well is your job designed?* published by the Sheffield Occupational Health Project, which explains in simple language how to use the guide to score one's own job for the strain it puts on one's body. Tables allow the person to assess how much strain their working postures put on them, and a system of diagrams allows them to identify the position that most closely resembles their own working posture for arms and wrists and for trunk, legs and neck.

The above leaflets do not include detailed questions about the organisational or psychosocial factors of the work that may present a risk of RSI, although other HSE guidance does include these. However, it is important to take all these issues into account as the following case study from the USA shows. There, a major telecommunications company experienced a substantial number of RSI cases amongst telephone operators and, following an investigation during which a number of ergonomic improvements were recommended, it invested in dual-height adjustable workstations, height-adjustable chairs, new computer equipment and improved environmental lighting and noise levels. Two years later, the incidence of RSI remained the same and a further investigation was carried out. This found almost total compliance with ergonomic principles for computer workstations but high levels of employee complaints in respect of psychosocial factors of their jobs. This example shows that efforts to identify and solve RSI problems must address the total work system, which means looking at the psychological fit as well as the physical fit of the job to the worker. The equipment itself may

be state of the art but if the work and workplace are not organised properly and if people are working to unreasonable performance targets or piece rate systems then problems will still occur.

The sorts of questions that could be added to the previous list in order to assess the risks from psychosocial hazards include:

Does the job allow:

- no provision for sudden changes in workload?
- no provision for workers to control their own workload?
- no feedback about performance?
- no consultation about changes?
- no participation in decision-making?
- no opportunity for learning?
- no social contact with colleagues?

The results obtained from these checklists will enable the employer to identify the extent of the risk and the action that needs to be taken to minimise the risk of RSI.

Assessing whether there are symptoms of RSI amongst the workforce

As part of the risk assessment process employers should check whether any of their employees are already displaying symptoms of RSI. However, it is important to be aware that:

- many workers may not recognise their own symptoms as RSI
- many workers will be unaware of the serious nature of RSI even if they do suspect the symptoms
- many workers will continue to work regardless of their symptoms
- many workers will be unaware of the importance of reporting their symptoms early
- many workers will be afraid to report their symptoms

Employers should take account of these problems when trying to assess the extent of any existing problem in their organisation.

One way to find out whether employees have RSI symptoms is for employers to look at their accident book and at sickness absence records and to consult their occupational health service if they have one. However, since many employees will not recognise or report symptoms, as already indicated, employers will probably need to carry out a health survey of their employees. This should be done in an open and transparent way and employers will need to explain the purpose of the survey and demonstrate a commitment to resolving any problems whilst guaranteeing employment security to anyone found to have symptoms. If employees suspect that the real motive behind the survey is to weed out people with problems they will not have any confidence in the survey and are unlikely to take part.

The survey itself will have to be appropriate to the purpose and set out in a way that is easy to understand. The language used should be simple, with translations available in any other languages in common use amongst the workforce. The survey form could just be a list of questions or it might incorporate a body map on which workers could indicate sites of pain. The survey form set out in Chapter 6 is an example of a simple form which incorporates questions about symptoms with reference to different parts of the body as well as questions about the job.

The role of trade unions is vital in ensuring that surveys are done properly and are not used to weaken job security and discriminate against workers. The employer should consult the union at every step along the way and obtain agreement for the method to be employed. The union may well prefer to conduct its own survey, especially where there is distrust of management's intentions (see later).

5

PREVENTING RSI — WHAT EMPLOYERS MUST DO

Having taken a step by step approach to assessing where the potential for RSI is in their organisation and identifying who might be at risk, employers must implement the appropriate measures needed to prevent or control the risk of RSI.

The Approved Code of Practice to the Management of Health and Safety at Work Regulations sets out the principles which employers must follow when deciding the appropriate preventive measures to apply. The approach which the Code recommends is essentially an ergonomic and holistic one. The main principles include:

- avoid the risk altogether eg by not using a particular tool or process
- combat risks at source rather than applying palliative measures
- 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 to eliminating monotonous work and work at a predetermined rate
- take advantage of technological and technical progress to improve working methods and make them safer
- ensure that the measures form part of a coherent policy of reducing risks, which takes account of the way work is organised, working conditions, the working environment and any relevant social factors
- give priority to measures which protect the whole workforce
- ensure that workers understand what they need to do by providing information and training

The HSE have also published specific guidance for employers on preventing RSI, *Work related upper limb disorders — a guide to prevention*. This stresses the need for risk assessment and for applying ergonomic principles so that

the job fits the worker rather than the other way round. The guidance makes it clear that employers should look at:

- organisational factors — organisation of work, job rotation, management style, work rate, monitoring, consultation, bonus systems, stress
- task and equipment factors — use of force, repetitive movements, rapid movements, twisting movements, awkward postures, overstretching, lack of rest breaks, design of tools and equipment
- individual factors — training, height and build, personal protective equipment
- environmental factors — stressful noise, lighting levels, flickering lights, cold temperatures, vibration

This official guidance contains checklists to help employers identify problems and examples of what can be done. A whole range of other publications is available to help employers decide what to do.

The Reality of Work

In a ceramics manufacturing company workers had to paint figures on a piece rate system for 8½ hours a day with only a 30 minute break for lunch and one other 15 minute break. The job involved repetitive gripping and twisting movements. Some workers developed RSI. The company did have a written procedure for dealing with RSI but this amounted to how they would terminate the employment contract and did not mention prevention at all.

Poultry workers have suffered notoriously high risk working conditions with many of the tasks involving repetitive or forceful movements. Eviscerating, for example, requires workers to make forceful gripping and twisting movements of the hands and wrists to remove the guts from the poultry. Trussing requires workers to make repetitive and forceful movements of the wrists and thumbs to bend the bird's legs and wings and tuck the legs inside the body cavity. In a court case involving six poultry workers at Bernard Matthews, the court heard that one woman had been lifting the equivalent of 150 tons of turkey a day in the manufacture of turkey products. The judge found that the employer should have had an effective job rotation system and a suitable system

of training. The judge also noted that the company slowed down the production line when demonstrating it to potential customers and speeded it up again afterwards to regain lost production.

At a factory servicing charter aircraft, women workers re-upholstering aircraft seats were required to control the speed of the sewing machine by an elbow operated lever. Many of them developed tennis elbow as a result. The response of the employer was to move the lever so that they could operate it with their knees. The problem was not solved, merely moved to a different site of the body.

A Japanese computer manufacturing company setting up an assembly operation in Britain found that many of the assembly workers were complaining of neck pains. The conveyor had been brought in from Japan and was designed for Japanese workers who tend to be shorter than European workers and so was too low for many of the operators. In this case a new conveyor was designed. The case is interesting because in so many situations it is the reverse that happens. British workstations and tools are designed to suit European men and no account at all is taken of the fact that many of the operators are women or Asian workers who may be of much smaller stature or strength. They are just expected to adapt.

Some of the main measures that employers can take to prevent RSI are listed below under the headings identified at the beginning of this chapter. It is important that qualified ergonomists are brought in to provide expertise and advice so that RSI can be designed out of the workplace.

Improving work organisation

Work should be organised in such a way that employees' health and safety is not put at risk. Work organisation can be improved in a number of ways, for example:

- by improving communications between management and staff in both directions

- by consulting employees and their representatives about their jobs and any changes to them
- by ensuring that jobs which pose a risk and which cannot be completely eliminated are rotated so that no individual spends long on that task
- by ensuring that all employees have sufficient variety of tasks to enable them to use different muscles and postures and to make their job more satisfying
- by providing adequate rest breaks to prevent the build up of fatigue and by ensuring that the breaks are taken
- by identifying and removing stress factors from the workplace
- by giving workers control over their pace of work and how they plan their day
- by removing piece rate and payment by results systems that make earnings dependent on excessive work rates
- by removing bonus, performance or monitoring schemes which make workers push themselves beyond their capacities
- by having proper monitoring and reporting procedures for symptoms of RSI

Improving task and equipment design

This can be done by applying good ergonomic principles to the design of tools, equipment, workstations, tasks and work methods. Improvements can be achieved:

- by selecting tools and equipment appropriate for the job and suitable for the individual who has to use them
- by maintaining tools in a condition which makes them easy to use, eg by keeping them sharpened or lubricated
- by providing powered versions of tools
- by selecting tools with handles which allow the worker to keep their wrists straight
- by redesigning workstations so that everything is within reach, or so that controls are easier to use
- by providing seats, equipment etc that can be adjusted to meet individual needs and by providing training in how to adjust it
- by giving the worker more space in which to work
- by redesigning the task to minimise repetitive movements

- by automating the task
- by redesigning the work method to avoid overreaching and other awkward postures

Textile weaver working on an industrial loom to produce cloth for Marks and Spencer *Jenny Matthews/Format*

Taking account of the individual

Employers need to ensure that workers are not at risk through lack of training or because of individual factors. They can help protect their employees from developing RSI:

- by providing information and training about RSI and how to recognise the symptoms
- by providing information and training about how to avoid RSI through safe working techniques and safe working postures
- by advising employees of the importance of taking breaks before the onset of fatigue and of varying their work routines
- by informing employees of the importance of reporting symptoms of RSI straightaway
- by providing information on how to report symptoms of RSI and a suitable system for reporting
- by ensuring that workstations and equipment can be fully adjusted to accommodate people of different sizes, heights or particular needs

- by ensuring that workstations and equipment can be adjusted to the needs of people with disabilities
- by ensuring that women do not have to use equipment and tools designed for men
- by ensuring that new employees or those returning from a long break are allowed to build up their work rate gradually
- by ensuring that the wearing of personal protective equipment or clothing eg gloves does not increase the risk of RSI

Improving the work environment

The physical work environment can be a source of stress and strain to workers. Employers can help to reduce these stresses:

- by ensuring noise levels are kept as low as possible
- by improving lighting levels and removing irritating flicker or glare
- by improving temperature and ventilation
- by providing well designed protective clothing and regular breaks in a warmer environment for workers who have to work in cold conditions or with frozen goods
- by providing suitable rest areas away from the workstation for workers to have recuperative breaks
- by reducing the need to use vibrating tools
- by providing vibration absorbing grips on tools and by maintaining them in a good state of repair

Monitoring health

Health surveillance can play an important role in the prevention of RSI by detecting symptoms early so that remedial action can be taken. It should be seen as an essential backup to the preventive measures taken to design RSI out of the workplace. The Management of Health and Safety at Work Regulations require employers to provide health surveillance where:

- there is an identifiable disease or adverse health condition related to the work
- valid techniques are available to detect indications of the disease or condition

- there is a reasonable likelihood that the disease or condition may occur under the particular work conditions
- surveillance is likely to further the protection of the employees' health

Employers should at the very least set up an internal reporting system so that symptoms of RSI can be monitored and recognised early on before the condition progresses to a more serious state. In order for such a system to be effective, it must be explained properly to employees so that they understand the purpose of the system, how to recognise symptoms of RSI, how to report them and what will happen when they do report them. Employees are unlikely to report symptoms if they think their future employment will be put at risk so the system must be seen as a positive element of the employers' approach to RSI prevention. It should be linked to a policy on job protection.

Some employers have tried to introduce pre-employment screening in an attempt to weed out people who may be susceptible to RSI and so reduce the chances of future litigation against them. Not only could this amount to discrimination under the law, but the evidence shows that there is no reliable test available. Health surveillance systems have been reviewed in *Work related musculoskeletal disorders (WMSDs): A reference book for prevention*, which concluded, 'There is no scientific evidence to show that pre-employment and preplacement screening can predict the risk of developing a WMSD.' Even the HSE, in their guidance to employers, advise, 'Attempts have been made to devise screening tests to predict susceptibility to ULDs on a basis of skin temperature tests, wrist X-rays, muscle strength tests etc. These tests have not been shown to be effective and are not recommended.' The London Hazards Centre believes that the principle must be to make the workplace safe for everyone and not to try to select out all but a workforce of super-resilient men and women.

Good practice — what employers have done

It would be pleasing to provide extensive examples of employers' policies on RSI prevention. However, very few appear to have such policies, despite surveys which suggest that many employers perceive RSI to be a major problem. A study carried out by the Labour Research Department in 1996

found only 8 per cent of employers surveyed had introduced an RSI prevention policy. What action had been taken appeared to be on an ad hoc basis in response to problems that had already occurred. Successful compensation claims by employees have been a notable factor in getting employers to act. For example, Bernard Matthews and the Inland Revenue have both implemented preventive measures, including job rotation, breaks, better training and reporting procedures, in the light of well publicised awards to their staff, although the unions involved, the TGWU and the PTC, believe that the measures do not go far enough and that job insecurity means that many employees are still too afraid to report their symptoms for fear of losing their jobs. One of the measures introduced at the Inland Revenue in negotiation with the union is a no fault compensation scheme for RSI sufferers, which is described in detail in Chapter 9.

The HSE has drawn together a number of examples of what employers have done to solve ergonomic problems in their workplace and reduce the incidence of musculoskeletal disorders, such as RSI, and have published these in their guidance document, *A Pain in Your Workplace*. Many of the problems described should have been foreseen in the employers' risk assessments if these had been done properly. Nevertheless, the guidance provides many useful, practical case studies of measures, ranging from the very simple and inexpensive to the more complex and costly, which employers have implemented to overcome work related musculoskeletal disorders. And the knee-jerk reaction, 'we can't afford it,' of so many employers to any proposal for safer working conditions is shown once again to be completely groundless, since the measures proved extremely cost effective, not only in terms of improved employee health and quality of life but also in improved productivity and customer satisfaction. Employers should be asking not 'can we afford to do it?' but 'can we afford not to do it?'

A case in point is the description of a boxed games packaging operation where workers were suffering RSI in their arms and hands. The job was very repetitive and a number of risk factors were identified including awkward wrist movements when picking up the boxes from the conveyor, forceful pinching and gripping to lift the boxes and to force the last two boxes into the master carton, stooping and stretching to reach the boxes on the conveyor

and twisting from one conveyor to the other. The boxes were shrink wrapped and forcing them into the cartons often damaged both the wrap and the product. Various modifications were introduced to both the workstation and the work method, including reducing the conveyor speed, raising the height of the conveyor, repositioning the conveyor to reduce the reaching distance, enabling the games to be picked up in twos, and increasing the size of the master carton to make it easier to pack. The modifications cost only £1500, the RSI problems were significantly reduced and there was a 90 per cent reduction in damage to the packaging and customer returns.

On a car production line *Jenny Matthews/Format*

At an RSI conference in Edinburgh, GMB representatives from Levi Strauss reported on the measures taken by their employer to reduce the incidence of RSI, which is a well known risk in the clothing industry. Following a number of compensation claims, the company carried out an investigation and found that in each case the RSI had occurred after the employee had returned to work after an absence. There was a performance related pay system in operation and people were trying to achieve their pre-absence performance levels straightaway. The company did not withdraw the pay system but it did introduce a Graduated Return to Work scheme whereby staff who have been absent for 5 days or more are able to return to work at a reduced productivity rate but at the average earnings rate. Over a period which can

last up to 15 working days, depending on the length of the absence, the employee gradually builds up to the required productivity rate while maintaining their earnings level. The employee is not allowed to work any overtime during this period and is also allowed breaks to perform special exercises designed to help condition the muscles. A programme of stretching exercises that all employees are encouraged to carry out was also developed. In addition, the RSI reporting procedure was improved.

Display screen equipment — preventive measures

As already indicated, RSI is a risk for many different workers and is not confined to computer users, but most of the recent publicity about RSI has concerned keyboard users. The application of computer technology is becoming more and more widespread and increasing numbers of workers are finding that they have to use computers in their work. Also, computer work appears to be particularly associated with the diffuse type of RSI. The London Hazards Centre book, *VDU Work and the Hazards to Health*, published in 1993, describes the hazards of VDU work in detail and includes a chapter on the risk of RSI from this type of work which contains useful advice on how to avoid it. The HSE has also published guidance to employers on how to comply with the display screen equipment legislation. Some of the measures that employers can take to prevent RSI from work with display screen equipment are set out below. It is important when carrying out risk assessments to take account of the difference in use between workers who have been trained to touch-type and those non-typists who have been given keyboard equipment to use in their job and who may use only two digits. The latter may be at more risk of strain injuries in the neck area because they tend to spend more time looking down at the keyboard rather than the screen. And although their hands may be less static than those of a trained typist as they search around the keyboard for the correct key, they may be put under excessive strain if they spend prolonged periods of intensive keying in with only two fingers. The same will apply, of course, to workers who have to spend long periods doing repetitive number pad entering with the same fingers.

The spread of Windows software has also led to more widespread use of a mouse in addition to the keyboard and this is being implicated increasingly in the development of RSI. Problems identified include the design of the mouse itself, the position of the mouse at the workstation, and the nature of mouse usage. Excessive double clicking and click and drag operations appear to be particularly associated with RSI problems. Some users have found that a trackball is easier to manipulate and causes less strain but there are many different types available and no systematic tests have been carried out. A number of people have reverted to a mouse because they found it more difficult to position the cursor accurately with a trackball and this was causing them stress.

The importance of ensuring that VDU users are given their legal entitlement to an eye test and any corrective glasses that they may need for VDU work should not be forgotten when assessing the risks of RSI. If users have not had any vision defects corrected and sit hunched over the screen to read it properly or straining with their necks bent to read through the appropriate half of their bifocals, then the risk of musculoskeletal problems is increased.

It is also important to be aware of the wide variety of computer aids and accessories currently on the market, some of which may be of extremely dubious benefit or which could be positively harmful. While it may be sensible to provide a choice of keyboard or mouse styles so that workers can select the one that is most comfortable for them, indiscriminate use of, say, wrist rests, without proper advice on how to use them, could lead to an increase in RSI cases because workers are resting their arms in a static position while typing instead of resting their wrists on them between periods of typing. However, it should be noted that many of these accessories have not been fully validated and what may work for one person could be damaging to another. Many unscrupulous manufacturers are making completely unsubstantiated claims about their products and putting workers' health at risk.

Preventing RSI in VDU work

Work organisation

- ensure keyboard work is alternated with other tasks requiring the use of different muscles
- ensure that regular breaks and microbreaks are taken
- ensure that intensive keyboard work is restricted to a maximum of 4 hours a day
- avoid intensive keying in with two fingers
- ensure that workloads and deadlines are reasonable
- ensure that the principles of software ergonomics are applied
- ensure that software is suitable to the task
- ensure that software is easy to use and adaptable to the knowledge and experience of the worker
- ensure that software displays information in a format and at a pace adapted to the worker
- avoid performance monitoring
- avoid payment systems linked to the number of keystrokes
- provide training and refresher training
- provide training in touch typing to employees who have to do a substantial part of their work at the keyboard

Workstation

- ensure workstation is large enough and deep enough to accommodate all the equipment and to allow users to adjust the position of the equipment to suit them
- ensure chair is fully adjustable for seat and back height and angle
- ensure chair and its mechanisms are maintained in working order
- ensure worker can work upright , face forward and squarely on
- ensure workstation height is adjustable
- ensure worker has adequate leg room eg by providing pedestal rather than fixed drawers
- provide footrest if user cannot rest feet flat on floor when seat height is correctly adjusted for typing position of arms
- provide document holder so that copy can be positioned at same eye level as screen

Work equipment — screen, keyboard, mouse

- ensure the screen's tilt and swivel mechanisms are in working order

- ensure the screen is kept clean and free of dust
- ensure the appropriate polarity is used for the conditions (dark background to reduce flicker, light background to reduce reflections)
- ensure that users have had eye test and any corrective glasses to avoid hunching/peering at screen
- provide adjustable screen holder if screen is too low or too high for the user to read comfortably
- rearrange layout so that screen can be positioned at 90° to window to reduce glare
- provide screen filter if glare cannot be reduced by repositioning
- provide a choice of keyboards to suit users eg left-handed keyboards, split keyboards, ergonomic keyboards, keyboards with more cushioning of keys, keyboards with integral mouse function etc
- provide voice recognition systems to minimise keyboard action
- ensure keyboard height can be adjusted
- ensure that keyboard can be used in a flat or sloping position
- ensure keyboard can be positioned squarely in front of user and at a distance that allows elbows to be kept close to the body
- ensure keys are kept clean and legible
- provide a choice of mouse or trackballs to suit users
- provide a three-button mouse to avoid double clicking
- ensure mouse can be placed within easy reach so user does not have to stretch out arm to use
- provide a mouse mat
- ensure mouse is kept clean

The individual

- provide training in the risks of RSI and how they can be minimised
- provide training in the importance of taking breaks
- provide training in correct posture to be adopted at keyboard
- ensure that correct posture can be adopted in each individual case
- ensure that individual needs are taken into account and that people at the extremes of height and size ranges are catered for.

6

ORGANISING TO PREVENT RSI IN THE WORKPLACE — WHAT WORKERS CAN DO

THE NEED FOR TRADE UNION ACTION

Although the law places clear duties on employers to prevent RSI the number of cases continues to rise. The Tory government's drive to deregulate whatever it can and its massive cuts in the resources available to the HSE have meant that employers are getting away with breaking the law and continuing to cripple their employees. They are well aware that they are unlikely to see an enforcing officer for several years as staffing levels are cut by around 20 per cent. The situation is set to become worse as a change in regime at the HSE is placing greater emphasis on self regulation by employers and is cutting back on preventive inspections by over a third. In future, inspectors will be using their enforcement powers less and less and concentrating on their role as providers of advice and guidance to employers.

In addition, legal standards are very much minimum standards, arrived at by compromise, and trade unions have always played an important part in achieving better standards through negotiation with employers.

So improvements in the workplace will continue to depend on action by employees themselves through their trade unions and safety representatives.

Trade union safety representatives

Trade union safety representatives can play an enormous part in securing health and safety improvements in their workplace because their role is

recognised in law and they have wide ranging rights to support them. These are set out in the Safety Representatives and Safety Committees Regulations 1977 and include the right:

- to be consulted about any health and safety matter including any proposed changes in the workplace and the health and safety training of employees
- to investigate potential hazards in the workplace
- to investigate complaints by employees about health and safety
- to make representations to the employer
- to inspect the workplace at least every three months
- to inspect health and safety documents held by the employer
- to investigate accidents in the workplace
- to represent members in consultations with HSE inspectors
- to receive information from inspectors
- to attend meetings of safety committee
- to paid time off to perform functions
- to paid time off for health and safety training
- to facilities from the employer to perform functions

Trade union safety representatives should use these rights to ensure that their employer complies with the duty to prevent RSI. Representatives should not suffer any detrimental action by their employers as a result of their health and safety activity.

What safety representatives can do

Inform yourself

Find out as much as you can about RSI. Use this book and any publications from your own union to help you. Other sources of information are listed at the end of the book. There is still a lot of controversy over RSI so you need to ensure that you are well informed and equipped to deal with people who argue that RSI does not exist. You could also find out whether your trade union or the local TUC or health and safety advice centre runs any courses on RSI and apply to go on one. You have a right to appropriate health and safety training.

The right to appropriate health and safety training has been clearly upheld by a recent Industrial Tribunal which heard the case of Brenda Pearson, a TGWU safety representative at Pork Farms

pizza factory, who was prevented from attending a TUC course on RSI because her employer said the issue was irrelevant. The Tribunal disagreed with the employer and the safety representative won her case.

Carry out your own survey

Conduct a survey of your members to find out whether any of them have symptoms of RSI. You will need to raise their awareness of the problem first so that they understand what they are being asked. Circulate the information you have found as part of your own researches to your members and put RSI on the agenda for discussion at union meetings. Make sure that your members understand that RSI is not something only suffered by keyboard workers.

Survey the jobs in your own organisation to see if there is a potential for RSI that needs to be tackled. Make sure that you include environmental factors in your list of things to check. And just as importantly, consider how work is organised and broken up and whether the managerial culture in the organisation or stress could contribute to the risk of RSI. The information in the previous chapters will help. You can use your workplace inspection rights to do this.

Packing up McVitie's chocolate digestives *Maggie Murray/Format*

You could devise your own survey form or use the ready made one here. You could add some other questions based on information in this handbook but don't overwhelm your members with too much detail. The important thing is to keep the form short and relevant and written in simple language that people will understand.

You will need to decide whether it will be more effective to distribute the questionnaire for members to fill in themselves or whether to ask the questions orally. There are several reasons why the latter may be more appropriate. Some people may have a fear of filling in forms. Others may find it difficult to understand any technical terms. Some may find it difficult to understand because English is not their first language and you may have to get someone to translate for them. And some people may have such severe symptoms of RSI that they find it too painful to write.

Some people may agree to participate only if they cannot be identified. You will have to choose whether to ask for names. Although names may be helpful in identifying who has problems they are not essential for the survey to be effective. Whatever you decide it is essential that you make it clear to participants that the information will be kept confidential to the union and will not be given to management. Only the overall results should be used to support your case. Information about identifiable individuals should never be used without their permission.

Take up any problems with management

You should discuss the results of your survey with your members and decide what to do next. If the survey shows that there are problems you will need to take these up with management, either directly or via the safety committee. You should put all your evidence together and prepare the case you wish to present. You should refer to the legal duty to remove health and safety risks and ensure that a timetable is agreed for remedying the problems promptly. Make sure that you keep your members informed throughout.

At the London School of Economics UNISON representatives became concerned at reports that computer staff were suffering ill health, especially RSI, because of their work. They carried out

a survey to find out the extent of the problem, including questions about members' health, how long they spent at their VDU, whether they took breaks and how long for and also whether they had received health and safety information and training for VDU work. They found that over 70 per cent worked more than four hours a day on the VDU, 50 per cent did not take breaks, 65 per cent had experienced health problems and 78 per cent had not been shown the School's training video on VDU work. The problem was identified as an organisational and management one, largely due to cuts in staffing levels, an increase in the volume of work of remaining staff, too many short deadlines, last minutism, unsympathetic management, stress and bullying. The equipment itself was adjustable and of good standard and was not perceived to be a problem although in some cases the workstation layout needed to be improved and proper training given. The representatives were able to put together a comprehensive report which they presented to management at the joint committee. The union is now pressing for a security of employment agreement so that people will have the confidence to report their symptoms and get their work situation reassessed.

Following a workplace inspection at a small foundry making cast iron access covers for water mains, AEEU safety representatives were concerned at the design of a particular inspection job and identified a number of RSI risk factors for the workers involved. The job required the men to lift the covers from the conveyor with one hand, and with a brass hammer held in the other hand, strike the covers to shake off the sand residue from the casting process. They then had to examine the cover for cracks and twist and throw any rejects on to a pile of spoils behind. Each cover weighed between 10 and 35 kilos and they were lifted at a rate of one every 15 seconds. The repetitive hitting action, the vibration from the hammer blows and the lifting and twisting meant that no-one was able to perform the job for longer than 18 months before they suffered elbow and/or back damage. The safety representatives devised an inexpensive solution to the problem, using equipment

already available within the foundry, and took their proposals to management. Management implemented the representatives' solutions and now the task involves two conveyors, one 18 inches lower than the other, so that as the covers drop from one conveyor to the other the sand residue is shaken off and the task of striking the covers manually is virtually eliminated. Because the inspectors still use the hammers occasionally, thick rubber flooring material has also been installed to absorb most of the vibration.

Sample questionnaire for repetitive strain injury

About you

1. Name (optional)

2. Department

3. Do you suffer from swellings, numbness, tingling, stiffness, aches or pain in any of the following parts of your body? (Tick appropriate boxes)

	Swelling	Numbness	Tingling	Stiffness	Aches	Pain
Back						
Neck						
Shoulders						
Arms						
Wrists						
Fingers						

4. Have you visited your doctor about any of these complaints?

5. What diagnosis or treatment did the doctor suggest?
   Diagnosis
   Treatment

About your job

1. Do you have any of the following types of movement in your job?

a. repetitive movements of the wrists or hand
b. repetitive movements of the arms or shoulders
c. repetitive movements of the feet or legs
d. frequent use of awkward wrist positions or bending of the wrists
e. a twisting, clothes-wringing motion of the hands and wrists
f. keeping parts of your body in a fixed position, with your muscles tense eg holding your arms above your shoulders; holding your elbows out
g. repeated stretching or reaching movements
h. repeated squeezing, screwing, pressing or twisting movements

2. Is your workstation well designed for the job you do?

a. can you sit square to do your job?
b. does your chair have good back support?
c. is your chair easily adjustable?
d. is your bench or desk too high or too low?
e. do you have difficulty in reaching the controls, levers, pedals etc?
f. do you have to stretch or reach repeatedly in a particular direction to carry out your work?

3. Does the machine/process-line/management/etc determine the speed of your work or can you control it?

4. Is your output measured/is there a monitoring system in operation?

5. What work-rate/piece-rate do you have to achieve?

6. How often do you take a rest break?

7. Can you think of any obvious and immediate improvements that could be made to your job?

8. Have you ever raised any of these problems with your boss/management?

9. Do you take painkillers in order to keep on working?

10. Are there any other comments you would like to make?

Make sure that you are consulted

The consultation rights of safety representatives were extended by the Management of Health and Safety at Work Regulations. Your employer has a duty to consult you in good time about a range of items including:

▲ the introduction of any measures that could affect the health and safety of your members

- the health and safety consequences for your members of the introduction of new technologies into the workplace
- the health and safety information and training provided to your members
- the arrangements for appointing a competent person to assist the employer to carry out their health and safety duties

You should use these rights to ensure that you discuss with your employer any changes which could lead to an increased risk of RSI. Remember that you need to consider more than new equipment. Any changes in working hours, shifts, etc could have implications for health and safety, particularly if members are being required to work under increased pressure and with fewer breaks. Payment systems which tie earnings to excessive work rates should be avoided, even if your members find them superficially attractive as a way of increasing their take home pay. These systems present a particular risk as workers become locked into a work pace which damages them and from which there is no opportunity of recovery. Trying to get straight back into the required pace after a holiday or other break has been the cause of RSI amongst many workers.

> **'About 15 years ago, when I was working in the North of England, I negotiated a bonus system for data entry clerks based on the number of entries, which members were really pleased with at the time as it was a very good deal in money terms. However I often think back to that agreement and wonder what happened to those women. Knowing what I do now about RSI I would never negotiate such a scheme again.' (Trade union negotiator)**

It is also important to question any new work methods, the introduction of new management techniques etc. What are the real reasons for introducing them? What effect will they have on members' health? We are now familiar with the effects of the scientific management theory known as Taylorism, the breaking down of jobs into short cycle, repetitive tasks, which is one of the main causes of repetitive strain injuries amongst industrial workers, but new methods which seem to be better may also have hidden dangers. This is particularly the case where methods which appear to work well in one country are introduced into British workplaces in the context of the British

employers' culture of rationalising and streamlining, ie squeezing as much work as possible from as small a workforce as possible. So, even if you accept the theory, you need to check whether the practice matches it.

For example, team working is usually described as work carried out by teams of multi-skilled individuals working as an autonomous group with responsibility for problem-solving and for finding better ways of working. The team provides a supportive environment in which the normal emphasis on status and authority is reduced and common objectives shared. In practice it can result in teams competing against each other to meet targets set by management, and also competitive rather than co-operative relationships within the team with peer pressure and group bullying of individual team members who are seen not to be keeping up or pulling their weight. The devolution of autonomy to teams can also confuse the question of who is responsible for health and safety and may lead to corners being cut.

New management techniques can increase the level of stress amongst the workforce, making them more at risk from RSI. Total Quality Management (TQM) has even been described as management by stress. A discussion of new management techniques and their role in increasing levels of workplace stress is contained in the London Hazards Centre publication, *Hard Labour: Stress, ill-health and hazardous employment practices*. In an MSF guide to new management, published in 1994, the results of an opinion survey were reported which showed that while new management techniques promised a greater level of control over the level and pace of work, only 9 per cent felt that this had actually happened; 91 per cent felt that the control they had over their job had either stayed the same or got less. And whereas 8 per cent thought their job satisfaction had improved, 92 per cent thought it had stayed the same or got worse.

At a Ford motor plant, TGWU representatives have taken action to ensure that new management techniques are not imposed without consultation. It is now accepted that health and safety is the highest priority and that no changes will be implemented until a thorough assessment has been made of any associated risks.

USDAW representatives in a Midlands slaughterhouse learned that because of the BSE crisis their organisation was diversifying its work into boning out turkey thighs. The company called in the HSE to give advice and the union also became involved in discussions about the layout of the line. As a result the company installed adjustable work benches, applied proper ergonomic design to the work and introduced job rotation in order to design out RSI from the new tasks. The representatives report that so far the system appears to be working well.

Negotiate a policy

A good idea would be to negotiate a policy on RSI prevention with management. The provisions to aim for include:

- a management commitment to undertake risk assessments of all work procedures, with the help of competent persons including qualified ergonomists and in consultation with safety representatives, to identify RSI risk factors
- a management commitment to remove all risk factors from the workplace
- information, instruction and training to be given to management, supervisors and employees about RSI, its symptoms and its prevention
- clear procedures for the early reporting of symptoms on a no blame basis
- clear procedures for dealing with diagnosed cases
- an agreement that people with RSI symptoms will be offered temporary or permanent redeployment or time off for recovery with no loss of pay, conditions or status
- an agreement that the employer will pay for any specialist treatment that is required
- an agreement for a 15 minute rest break during every hour of continuous repetitive work
- the setting up of a joint union/management working group on RSI to oversee the implementation of the RSI prevention policy
- a commitment to monitor and review the policy

The TUC have published a model policy on the prevention of RSI. As with all model policies it is not something just to be agreed and filed away but should be discussed, fully understood and adapted as a living policy. This

means that if such a policy is introduced, the joint safety committee or a working group of it should monitor its implementation and effectiveness.

TUC Model Policy

Aim

The aim of this agreement is to provide a healthy and safe working environment and prevent the development of RSI. The employer and the union recognise that there must be a programme of preventive action which should include the following commitments:

- **to consult the union on the development of the programme**
- **to conduct risk assessments for tasks identified as potentially hazardous by agreement with management and the union, or subsequently through a regular programme covering every aspect of work, or in the event of significant changes to work systems, work methods, equipment, environment or training**
- **to implement changes identified as necessary by such risk assessments and review the implementation of these changes**
- **to use agreed independent competent persons to assist in implementing this policy**
- **to use an agreed medical practitioner experienced in RSI to monitor staff on a regular basis**
- **to provide resources for the education and training programme**
- **not to victimise or harass employees who develop RSI or report symptoms**

Risk assessments

The following factors which are known to cause or contribute to RSI will be taken into account, in terms of work equipment, workplaces and methods:

- **frequency and duration of repetitive movements**
- **force used in performing the movements**
- **absence of adequate recuperative breaks**
- **awkward postures, particularly degree of fixed muscle loading in the trunk, shoulders and arms**

- ▲ degree of stress involved in the job contributed to by its boring and monotonous nature or lack of opportunity for initiative, responsibility or individuality
- ▲ sudden changes in work rate or fast pace of work
- ▲ individual monitoring of work leading to stress and work pressure
- ▲ vibration

The risk assessment will involve union and management assessors and reports by independent competent persons, who should also assist in implementing the preventive programme. The employees concerned will be involved in the risk assessment and be provided with a copy of it.

Information, education and training

The employer will consult with the union regarding an education programme for employees which will include:

- ▲ ergonomic principles associated with work equipment, work stations etc
- ▲ ways of making necessary adjustments to furniture, equipment, lighting etc
- ▲ regular monitoring of the workplace to ensure it remains ergonomically sound
- ▲ exercises for eyes, shoulders, hands, arms etc to prevent overstretching of the muscles
- ▲ information on potential hazards associated with methods of work and the importance of safe work rates and adequate rest breaks
- ▲ information on management's health and safety policy
- ▲ information on health and safety reporting and monitoring systems as well as signs and symptoms of RSI
- ▲ training of managers and supervisors in the sympathetic handling of known or potential cases

Safety representatives will be entitled to time off with pay to attend TUC and union courses dealing with RSI.

Work routine

Management and the union agree that a reasonable work rate varies with the capabilities of individual workers. The availability of rest breaks in work involving RSI risk factors is necessary to avoid the accumulation of fatigue and strain which contribute to RSI. Breaks in work involving RSI risk factors will therefore be provided on the basis of a total of 15 minutes during each hour, additional to personal health and meal breaks.

Notification

A notification system will be set up as follows:

- employees will be encouraged to report signs and symptoms of RSI
- incidences of such signs and symptoms will be logged in the accident book
- line managers will have responsibility for monitoring the incidence of signs and symptoms and proposing remedial action, including reviewing the risk assessment, for the employees for whom they are responsible
- safety representatives will be informed periodically of the incidence of signs and symptoms in their area of responsibility and whenever the incidence rises appreciably
- annual statistics will be supplied to the health and safety committee

Responding to diagnosed conditions

When a case of RSI is medically diagnosed, management will assess necessary action on the basis of medical advice, including:

- the extent and nature of the condition
- the possible causes of the condition
- the course of treatment recommended
- the length of time needed for rehabilitation
- the limitations placed on employment in terms of both tasks and recommended duration of work

The following steps will be taken:

- a review of the risk assessment of the job involved by an independent competent person to be agreed by both management and union
- provision of the assessment and reports to the employee concerned
- implementation, as appropriate, of changes necessary to enable the employee to return to their position, or of suitable retraining and redeployment
- the granting of access to the workplace by health professionals who are treating the employee
- training of the employee in the application of ergonomic and preventive principles

Redeployment

Where the employee is redeployed the following will apply:

- job security will be a primary objective and employees who have to take sick leave will receive time off with pay
- there will be full consultation with the employee on career options and procedures prior to any decisions being taken
- detailed job descriptions of prospective positions will be provided to the employee, their treating medical practitioner and their union
- modifications to prospective positions to make them suitable in the light of the nature of the condition and treatment will be undertaken where necessary
- a graduated return to work will be allowed with no pressure to return to work until fully fit

Monitoring and review

Regular monitoring and annual review of this policy will be carried out by the health and safety committee and any difficulties reported to the person responsible for the implementation of the policy.

The NUJ has been very active on the issue of RSI as the increased use of computer technology in the newspaper industry during the 1980s led to a massive incidence of RSI amongst journalists. The situation was exacerbated by the number of tight deadlines that journalists had to meet. The union has set up a special RSI group, which meets regularly to monitor the situation. It has been involved in a number of negotiations with employers on procedures to deal with RSI and details of the compensation terms for journalists at the *Financial Times* are described in Chapter 9. An example of an NUJ agreement on RSI prevention is that reached with the *Newcastle Chronicle and Journal*, the main provisions of which include:

- a commitment to reduce the risk of RSI
- all existing and new jobs to be subject to a risk/ergonomic assessment
- trade union representatives to be involved in monitoring implementation of policy
- awareness programmes to be provided to employees potentially at risk
- awareness programmes to be provided to those involved in design of work areas
- employees to be informed of the risk of RSI and the procedures for reporting symptoms
- monitoring procedures to be adopted in all departments
- every effort to be made to offer alternative employment without loss of pay or seniority to employees with symptoms of RSI to avoid risk of further injury
- guarantee of same position on return to work for any employee having extended sick leave for RSI
- no pressure to be put on employees on sick leave or in alternative positions to return to normal duties until they are fully fit

If a member comes to you with symptoms

If any of your members comes to you with symptoms of RSI it is important that you are sympathetic and that you show that you believe them. You should make sure you keep a written record of all the details in case the member wants the union to help in a future compensation claim.

You should ensure that:

- ▲ they enter their symptoms in the employer's accident book
- ▲ they report their symptoms to their supervisor so that their work can be reassessed and preventive measures introduced
- ▲ they report their symptoms to their family doctor and explain what work they do
- ▲ they follow their doctor's advice and stop doing whatever it is that is causing the symptoms
- ▲ they report to the DSS

If your employer has introduced a system of reporting RSI symptoms you should also ensure that your member reports symptoms through the appropriate procedures.

You will need to check that the employer reviews the risk assessment for the member's work and workstation and makes any changes that would alleviate the problem. You should also investigate the possibility of alternative work for the member. In addition it may be possible to use the Disability Discrimination Act 1995 to ensure that the employer adapts the work or workstation rather than try to dismiss the member if they are too incapacitated to do their job effectively. If the member is a computer worker it may be possible to seek advice on alternative equipment from the Computability Centre in Warwick. If it looks as if the problem could be more widespread you should try and agree a RSI prevention policy which also assures job security

IF THERE IS NO UNION

If there is no union in your workplace there are still a number of actions that you can take if you are concerned about RSI risks. The best way to start is by talking to your workmates. You could show this book to as many of them as possible, particularly those who have been off work with possible RSI, and discuss with them the best way forward. The more of you that agree the action to take the stronger you will be.

Under legislation introduced in 1996, employers in workplaces where there are no trade union safety representatives now have a duty to consult employees

about health and safety. (Their existing legal duty to consult trade union safety representatives has been described earlier in this chapter). The Health and Safety (Consultation with Employees) Regulations 1996 require employers to consult employees in good time about a range of items including:

- the introduction of any measures that could affect the health and safety of those employees
- the health and safety consequences for those employees of the introduction of new technologies into the workplace
- the health and safety information and training provided to those employees
- the arrangements for appointing a competent person to assist the employer to carry out their health and safety duties

They must consult either the employees directly or representatives of employee safety who must be elected by the employees themselves.

You should ensure that you and your workmates elect your own representative of employee safety. You should choose someone that you all trust to act on your behalf and who will consult with you and keep you informed. They don't have to be a technical expert — a concern for colleagues' health and safety and commitment and enthusiasm are just as effective qualities.

Remember that it is always preferable to have trade union safety representatives to represent you as they have the additional powers and the support of the union, its health and safety training provision, its health and safety department and its research and legal facilities behind them. So always join the union if you can.

If you can't join a union then make sure you make the most of these new consultation rights. Consultation is a two-way process so don't just wait for management to come to you. If you have something you want to discuss with them then take the initiative and raise it with them through your representative of employee safety under your consultation rights. But make sure you have prepared yourselves well beforehand.

A useful method of raising your colleagues' awareness of RSI and uncovering the extent of the problem is to do a survey. You can use the simple form

included in this chapter. In fact most of the advice given to trade union safety representatives in this chapter will also be useful to non-union representatives of employee safety in tackling the issue of RSI with the employer.

When you have analysed the survey, you should meet with as many of your workmates as possible to discuss the results and how to raise them with management. Make sure that management know that the employees who have come to meet them are representing all of you. And never go alone to meet management, even if you are the elected representative of employee safety. It is always advisable to have at least two of you to corroborate what was said. Put everything in writing and keep a record of everything that was done.

When you go to meet management you should make it clear that you are well informed about health and safety legislation and their legal duties under it. You could suggest that they set up a working party to discuss a strategy for preventing RSI. The TUC model policy gives you some idea of the things to aim for.

If management are unco-operative or obstructive, or if employees are too afraid to take things up, you should consider contacting the enforcing authority (either the HSE or the local Environmental Health Department, according to the type of workplace you are in).You can do this anonymously and the authorities should act upon such complaints.

The best way of organising to prevent RSI is undoubtedly for you and your colleagues to join a trade union. Once a trade union is recognised in your workplace then all the rights enshrined in the Safety Representatives and Safety Committees Regulations, listed earlier, come into effect. If you are not sure which union to join you can contact the TUC Organisation and Services Department (see Contacts) who will put you in touch with the appropriate union for your kind of work or workplace.

RSI campaigns

There has been growing activity at all levels by workers and trade unions on the issue of RSI as they recognise that it is a serious problem which is set to become much worse if they do not mobilise to secure preventive action in the workplace.

At national level the TUC ran a major campaign on RSI under the banner, Don't suffer in silence, following the identification of RSI as a priority area for action by member trade unions and its designation as a TUC Common Action Priority. The campaign involved trade union health and safety specialists, ergonomists, physiotherapists and personal injury lawyers. As part of the campaign, the TUC held conferences around the country, published a range of useful documents and teaching materials, and produced extensive campaign leaflets, bulletins, stickers, etc.

The campaign was successful in raising awareness and individual trade unions used it to build their own campaigns at both national and local levels. The GMB, one of the first unions to highlight RSI as an important health and safety issue, has updated its own guidance to members. USDAW, the union representing retail sector workers, whose members include many at risk groups such as supermarket checkout workers, has also produced comprehensive guidance for members which contains useful checklists throughout. Most other large unions have published advice for their members on RSI.

The finance sector union BIFU has published a number of guidance documents and leaflets for its members and, in response to a motion passed at its annual conference, is running a campaign for a maximum rate of 10,000 key depressions per hour as part of its fight to prevent RSI amongst keyboard workers. It is also campaigning jointly with the Chartered Society of Physiotherapy for more resources to be made available to expand NHS physiotherapy services for RSI sufferers.

Other trade union initiatives have taken place in response to the HSE's campaign on musculoskeletal injuries, *Lighten the Load*, and the designated Workplace Action Week. During this period many safety representatives organised special RSI events and workplace ergonomic inspections. In some cases they were able to use the HSE-backed campaign to get their employers involved. The GMB, for example, ran a special campaign to get employers to sign up to Workplace Action Week and commit themselves to tackle these issues more effectively.

The London and South East part of the TUC campaign used Workplace Action Week to run a conference emphasising how trade unions can organise and negotiate to prevent RSI and putting the case for stronger enforcement

by the HSE of the Management of Health and Safety at Work Regulations and the Health and Safety (Display Screen Equipment) Regulations. They also used the campaign to help local workplace safety representatives carry out surveys and use the results to take up RSI problems with their employers.

In one large organisation, using VDUs and data entry systems intensively on a 24 hour continuous shift basis, the safety representatives carried out an RSI survey of members, which had an over 90 per cent return and which revealed considerable problems. Although the response from management was extremely hostile at first, the union's action was the trigger for management to start to take the problem more seriously and gradually to introduce improvements. Staff now have better workstations and a 15 minute break from VDU work in every hour. Management are also bringing in an ergonomics team to assess the tasks more thoroughly. And following union intervention, a proposal from management to introduce a bonus system based on achieving an extremely high target rate has been put on ice.

The Hazards Campaign has also been actively involved in campaigning around RSI. There have been regular, well attended workshops on RSI at the national Hazards conferences and also at the European Work Hazards conferences, at which much useful information has been exchanged and contacts made amongst workers. Activists have also used the National Hazards Weeks to organise awareness raising events about RSI in their local areas. The Occupational Health Projects have also been active in disseminating information about RSI to GPs and sufferers. The Sheffield RSI Campaign started as a result of the concern on the part of the Sheffield Occupational Health Project and the trade union safety committee about the number of cases that they were seeing and is now an active support group meeting regularly. The Camden and Islington Occupational Health Project helped to organise an exhibition on RSI in conjunction with Camden Council during Workplace Action Week.

In Birmingham, the Health and Safety Advice Centre is working with local RSI support groups and helping to provide a forum at which they can meet together to discuss problems and develop ways of focusing their campaigns

more effectively and provide them with a stronger and more articulate voice. The Centre is also involved in a collaborative project on RSI with a local university and trade union representatives from a large manufacturing company. Together they constructed a tailor-made questionnaire which was circulated through the factory. The results of the survey should allow the problems to be assessed, the extent of them to be ascertained and those at risk to be identified. The information will help the union representatives to tackle the problems in the workplace with their employers, help the Centre provide advice to other union representatives on carrying out surveys and help the university academics in their research on RSI.

The Lothian Trade Union and Community Resource Centre organised a conference on RSI in Edinburgh in conjunction with the NUJ, which was well attended. It also ran the RSI workshop at a European Work Hazards Conference held in Rimini, Italy, at which delegates exchanged information and drew up a list of recommendations for action at European, national and workplace levels. In addition, the Centre provides valuable support to the Lothian RSI Support Group and has produced a very useful RSI Information Pack on their behalf.

The RSI Association has grown from a small self-help group into an established national body which provides advice on a whole range of issues of concern to RSI sufferers. It is currently running a fundraising campaign for research to be carried out into the physiological causes and treatment of RSI. On a smaller scale many local support groups are organising their own campaigns around issues of diagnosis, treatment and compensation, as well as providing basic support to RSI sufferers.

In London, for example, the Ealing RSI Group meets regularly to provide a forum to bring sufferers and their families together in a sympathetic environment. It has organised speakers on a range of issues affecting sufferers. Topics have included specialist physiotherapy, employment issues, social security benefits, personal injury claims, voice recognition computer systems, osteopathy, Alexander technique, disability rights and ergonomics. The London Hazards Centre provided a speaker on health and safety. The group also organises social events for sufferers and is in regular contact with another active London group, the Islington RSI Group, which meets monthly in north London.

7

DIAGNOSIS AND TREATMENT OF RSI

DIAGNOSIS

In our first RSI booklet in 1988, we highlighted the problem of getting a correct diagnosis for RSI. Unfortunately, in 1996, diagnosis of RSI is still difficult especially for the diffuse forms where the pathology of the injury is still not fully understood. And of course without a proper diagnosis it is difficult for sufferers to obtain the most appropriate treatment. Even localised conditions which are better understood may exist side by side with diffuse RSI so that treatment directed at the localised condition alone will be unsuccessful in dealing with the RSI as a whole.

There is still a great deal of controversy about RSI and its pathology and the average GP is ill informed about the general nature of RSI let alone any current clinical theories about it. At the time of writing two theories about diffuse RSI are gaining prominence and are described briefly by the late Stephen Pheasant, consulting ergonomist and acknowledged authority on RSI, in *Physiotherapy and Occupational Health* (Ed. Richardson and Eastlake).

> The first of the theories, and that favoured by Pheasant himself, considers diffuse RSI to be a painful condition of the muscles, due partly to an overuse injury and partly to a sensitisation of the nerves. The condition may also have a psychological component especially in chronic cases. This theory is supported by various sets of experimental evidence, for example that of Dennett and Fry in Australia which was based on evidence from biopsy studies. They identified structural differences in the muscle tissue of diffuse RSI sufferers and non-sufferers which they believed

could not be accounted for by known psychological mechanisms. This sort of evidence is important not only for understanding the pathology of diffuse RSI but also because it demonstrates that RSI does have an organic pathology and is therefore not all in the mind as some people have tried to suggest.

The second theory is that diffuse RSI is principally the result of the irritation of nerve tissues because of changes induced by what is called adverse mechanical (or neural) tension or altered neurodynamics. It derives from work done in Australia, where there was a widespread incidence of RSI in the 1980s, and has been described by Quintner and Elvey amongst others. In the UK this theory has been adopted by Jeffrey Boyling, physiotherapist and ergonomist and advisor on clinical matters to the Chartered Society of Physiotherapy, who has also emphasised the role of muscle imbalance. The reason that this theory is considered so important is that increasingly clinical experience is indicating that methods of treating diffuse RSI based on this theory are proving to be more effective than other forms of treatment.

Clearly more research is needed into diffuse RSI. However, it seems likely that elements of both theories will prove to be involved rather than a single causation being identified. What is clear, according to Pheasant, is that the clinical manifestations of diffuse RSI are sufficiently consistent as to indicate that there is a specific clinical condition known as RSI in addition to the localised conditions such as tenosynovitis.

However, many RSI sufferers have been met by ignorance, indifference or denial on the part of the medical profession. A survey of RSI sufferers' experience of doctors carried out by Hilary Arksey for the TUC found that only half the respondents said their GP believed in RSI. Most GPs, the first point of contact for most sufferers, lack training in occupational health and are unable to diagnose RSI conditions precisely. Many, under severe time pressure themselves, prescribe painkillers to relieve the symptoms but do not refer the patient on to a specialist for a correct diagnosis and treatment. Some GPs refuse to give a diagnosis because they think they will be drawn into protracted paperwork in a compensation claim. Many are reluctant to state

that a condition is work related. A few have even been known to refer dismissively to their patient's condition as compensationitis. Other GPs equate all RSI with tenosynovitis and diagnose accordingly, albeit with good intentions. The result is that the sufferer may receive the wrong treatment and may also get involved in an ill-founded and stressful claim for benefit since tenosynovitis is a prescribed industrial disease whereas most RSI conditions are not.

Even when a GP does refer the sufferer to a specialist, hospital waiting lists are so long that it can be six months or more before they get an appointment, by which time they may be in chronic pain, particularly if they have been continuing to work in the meantime. Moreover, they may have to be passed around several specialists before a final diagnosis is made and treatment begins. Those specialists most involved in treating RSI are physiotherapists, rheumatologists, hand surgeons and psychotherapists. Again, not all are sympathetic. One London woman, in great pain and finally having been referred to a consultant, was met with an extremely hostile response, constant assertions that she wouldn't qualify for compensation, much talk about her pain being psychological and almost no discussion about her clinical condition. Her first reaction on leaving the hospital was whether she should phone the Samaritans. Fortunately she had a local RSI support group to turn to.

The worst thing a GP can do for an RSI sufferer is to prescribe painkillers and send them back to work. The best thing they can do given the present state of knowledge is to refer them to a specialist even if this does mean a long wait. They should also urge the sufferer to contact their union if they have not already done so.

It is important that a written note is made by the GP or hospital of any physical signs, eg swelling. This could be crucial evidence in later legal proceedings.

TREATMENT

Once the RSI sufferer has been given a diagnosis they need to be given the appropriate treatment. Unfortunately this is another area where there is disagreement amongst the medical profession. Sufferers need to be aware

of all the options open to them so that they remain in control and can make informed decisions about whether to accept a particular treatment or seek a second opinion. The following is a list of some of the treatments available. It should be emphasised that the London Hazards Centre does not have any medically qualified staff and is not making any clinical recommendations, only setting out some of the options. The important thing is that treatment should begin as early as possible. If the condition reaches the chronic stage recovery may take years and it may be too late for complete recovery to be effected.

Rest

Rest is essential. The question is: how much rest is needed and what form should it take? Doctors used to prescribe a prolonged period of complete rest and some still believe that this is the best treatment. However too much rest may lead to muscle weakening and may not be the best treatment where the problem arose because the person maintained a static posture. To return straightaway to the same job which caused the RSI and at the same work pace after a long rest is a recipe for a rapid recurrence of the problem.

It is generally agreed that the important thing is to stop immediately the activity that was causing the problem and any similar activities. A short period of complete rest may be helpful particularly if inflammation is present. Painkillers may be taken during this period to help reduce the inflammation. After that most medical practitioners now recommend gentle exercise to help keep the limb mobile and avoid weakening of the muscle. In an RSI Association survey sufferers reported that a combination of rest, relaxation and gentle exercise was generally helpful.

Immobilisation

A common way of resting the limb is to immobilise it in a splint. This may protect the injured part but it could lead to the problem occurring in a different part of the limb. The compression of the splint could affect the functioning of the blood supply and nerve tissue. Also prolonged immobilisation can lead

to wastage of the muscle and weakening of the limb. If splints are used they should not be worn for more than a few hours at a time. Some sufferers may be tempted to use splints unnecessarily because they at least give visible evidence that they have an injury.

Physiotherapy

There are many different approaches that can be used and some of the standard forms of physiotherapy are completely inappropriate for the treatment of RSI, especially diffuse cases, and may make the condition worse. This may account for the fact that in surveys carried out for the RSI Association and the TUC a substantial percentage of respondents said that physiotherapy had not helped them.

Chartered physiotherapists are trained in treating muscle, joint and ligament complaints. It is important that the treatment is administered by a physiotherapist who is experienced in treating overuse injuries. Wherever possible a physiotherapist who has received specialist postgraduate training in neurodynamics and how to identify and treat problems of adverse neural tension should be sought since available evidence indicates that this treatment is giving the best results. However there are still very few NHS practitioners who have had training in these new techniques. Those who have been trained are mainly in private practice.

The aim of any treatment is to restore normal function to those tissues which are not normal. The sufferer should understand what tissues have been affected, what they should or should not do and when to exercise or rest. The treatment programme should be tailored to the individual and may involve a range of treatments including exercises and/or stretching of muscles and nerves, joint mobilisation, electrotherapy and ultrasound. Hydrotherapy or the use of ice packs may also be recommended to relieve pain and to complement the treatment. There are long waiting lists for most NHS physiotherapy services and the number that can offer the new specialist techniques is extremely limited.

Holistic approaches

RSI sufferers who are in chronic pain may benefit from the holistic treatments offered by pain management clinics such as the INPUT unit at St. Thomas' Hospital in London. These recognise the role of the sympathetic nervous system and of psychological factors in chronic cases, which mean that RSI sufferers may experience pain long after the RSI symptoms have gone and can become trapped in a downward spiral of pain, depression and despair. Treatment is therefore based on a mixture of physiotherapy and cognitive behaviour therapy and is aimed at teaching people to understand pain, enabling them to manage their own pain, helping them to recover through a programme of graduated exercise and relaxation techniques, and providing them with an understanding of good ergonomic principles. Counselling may also be provided. Regrettably there are only two such clinics in the country at the time of writing and waiting lists for referral are several months long.

Drugs or surgery

Medical treatment in the form of pain-relieving and anti-inflammatory drugs or steroid and non-steroidal injections may be offered but these are of limited value and may be positively dangerous if they are used to mask pain and enable the person to return to the work activity causing the injury.

Surgery may be suggested, usually in cases of carpal tunnel syndrome to relieve pressure on the nerve, but again this is of doubtful value since it does not always provide the relief anticipated and may even make the condition worse. Moreover, it is of little use if the sufferer returns to the same bad working conditions.

Complementary therapies

There are many forms of complementary therapy available although they are rarely provided under the NHS and can be very expensive. None are specifically designed to treat RSI but the holistic approach they offer may be of benefit in relieving pain or stress, aiding relaxation and helping with

good posture. They may be used where conventional methods have failed or to complement conventional treatment. However, in the latter case it is usually advisable to inform your medical practitioner to ensure that the treatments are compatible. It is important to check that the therapist is qualified and competent. It is also important to cease the treatment if it is not helping. The sorts of therapy that some RSI sufferers have used and found beneficial include acupuncture, aromatherapy, reflexology, Alexander Technique, yoga and relaxation techniques. However, the effectiveness of these therapies has not been assessed in any systematic way.

PREVENTION RATHER THAN CURE

It is evident from the above that both diagnosis of RSI, particularly its diffuse forms, and treatment of RSI remain contentious issues and more research is needed before its pathology is fully understood. To make matters worse, underfunding of the NHS, especially the non-glamorous disciplines such as physiotherapy, coupled with inadequate occupational health training and provision means that what treatment is available to RSI sufferers is spread very thinly and is hugely oversubscribed. Sufferers may have to wait so long for referral that their condition is well progressed before treatment becomes available.

By contrast, however, the risk factors for RSI are well known and have been well established for many years. Clearly the solution to RSI is to prevent it from occurring in the first place by the application of sound ergonomic principles to work and workplace design. Certainly any treatment of existing sufferers must include remedial measures in the workplace. Treatment will have been of only partial benefit if the risk factors likely to provoke a recurrence of the condition are allowed to remain.

8

IF YOU THINK YOU HAVE RSI

If you think you have symptoms of RSI there are a number of things you should do. The most important is to stop doing whatever it is that is causing the symptoms and not to try to work through the pain. Find out as much as you can about RSI and don't rush into hasty decisions before you are fully informed.

AT WORK

First, you should contact your trade union safety representative if you have one. They have legal rights to take up health and safety problems with the employer and can press for changes to be made to reduce the risk of RSI. They can also provide you with other helpful advice about what to do. If you are not in the union yet you should join so that you can get this vital support.

You should make sure that you record the full details of your symptoms in your employer's accident book. Employers are required by law to have one so don't be fobbed off. And don't let anyone tell you that you shouldn't record it because it's not a real accident. If it is work related it should go in the book and the entry will be vital evidence in any future claim.

You should also report the symptoms in writing to your supervisor so long as you think this will not result in disciplinary action and ask for any changes to be made to your work or workstation that will help minimise the problem. Ask to be given alternative work, or to be able to rotate jobs or to be allowed to take regular rest breaks if necessary.

If there is an occupational health department at your place of work report your symptoms to them. A good occupational health department should not only give you medical advice but should investigate your job to identify and remedy the risks.

Ask whether your employer has carried out a risk assessment for the work you do and check whether RSI risk factors have been identified and any remedial action taken. Your employer has a legal duty to carry out risk assessments and you should insist on this. You should also ensure that the risk assessment is revised in the light of your problems.

Seek advice about how to adjust your workstation to suit you if you haven't been given this information.

AT THE DOCTOR'S

You should report your symptoms to your GP as soon as possible, describing the work you do, any repetitive tasks or awkward postures, how long you spend at the work etc in as much detail as you can. Don't feel guilty about taking up their time — it's important to give as much information as possible. It can be helpful to write out beforehand, or get someone else to do it for you, a note setting out type of job, hours worked, posture involved, symptoms, any treatment successful or otherwise. This will help create more time for you to ask the questions you want. A written record could also be importnat in later proceedings.

If your GP says that it's all in your mind or you're just being neurotic don't just accept it. Show the doctor this book and any other information you can get hold of and insist on being referred to a specialist. You should ask to be referred to a physiotherapist, preferably one that has been trained in specialist RSI techniques.

Be cautious of any diagnosis which suggests your condition is arthritis. This is a common mis-diagnosis amongst GPs who are not very well informed about RSI and you may be prescribed completely inappropriate treatment. A blood test can confirm rheumatoid arthritis so ask for one if this is your GP's initial diagnosis. RSI does not show in such tests.

Remember that drug treatments only relieve the pain and do not treat the cause of the injury. You should not return to the same work while taking pain-killers as this may make the condition much worse.

To be prescribed complete rest may not be at all helpful particularly if you return to the same work at the end of it. Most people probably need only a short period of complete rest to be followed by gentle exercises to keep the injured part mobile. Referral to a physiotherapist for assessment will help to identify an appropriate treatment programme. The important thing is not to undertake the activities that caused the problem or any that are similar.

AT THE DSS

You should go to your local Department of Social Security (DSS) office to obtain details of the benefits that are available and how to claim them. Further information on DSS benefits is set out in Chapter 9.

AT HOME

You will need as much support as possible from family and friends especially if your condition has reached the chronic stage. Make sure that they understand the nature of RSI and what to expect from you by showing them this book. Although they may be sympathetic to begin with there may be times when tempers may start to get frayed, particularly when you have no visible signs of injury and they can't understand why you are unable to do some seemingly simple household task.

You may find it useful to get in touch with a local RSI support group (see Chapter 12). The RSI Association publishes an information pack which is full of advice for sufferers including suggestions for simple aids to make everyday tasks easier to cope with as well as advice on dealing with doctors. It has also produced an information sheet giving advice on setting up a support group if there isn't one in your area.

Joining the local support group can be a very positive thing to do . Don't be put off by the idea that it is full of people comparing symptoms and feeling

depressed. Most groups are extremely active in campaigning for better understanding of RSI, for better health care provision and for improved benefits. Some run telephone helplines and/or drop-in centres and some have produced their own RSI information packs. Many collect information about which local doctors are sympathetic to RSI and whether there are specialist physiotherapists in the area, which they are then able to pass on to members of the group.

There is also an RSI group on the Internet which you can use if you have access to this technology.

9

COMPENSATION

If you are suffering RSI caused by your work there are two main avenues for seeking compensation. The first is to sue your employer under common law and the second is to seek compensation for industrial injury under the DSS scheme. Neither avenue is simple and there is no guarantee of success.

SUING YOUR EMPLOYER

As well as their duties under criminal law, employers have duties under common law. Common, or civil, law is the law declared by judges and has evolved based on custom and precedent. Under common law employers have a duty to take reasonable care to safeguard employees from foreseeable risk. This has been interpreted by the courts as a duty to provide safe arrangements of work, which covers competent staff, adequate material, a proper system of work and effective supervision. Most cases brought by employees against their employer under common law are for negligence.

If you wish to sue your employer the onus is on you to prove that your employer was negligent. You will need to show that:

- you have an injury
- the injury was caused by your work
- there was a known risk of injury
- the employer should have known of the risk
- the employer could reasonably have done something to prevent the risk
- the employer failed to do anything to prevent the risk

The sort of evidence you will need to establish your case includes expert medical testimony, reports from your GP, a description of your symptoms,

details of your work, the system of work, any bonus or performance schemes, the work rate, whether adequate breaks were provided, accident book entries by you and any other RSI sufferers, sickness records, records of problems being raised with management, letters from the union etc, evidence of management's failure to remedy a problem that had been drawn to their attention, evidence that inadequate information, instruction and training about the risks of RSI was given, etc. You will also need to show that you took reasonable care of yourself and followed any advice that was given to you.

An action for damages against your employer must be initiated within three years of the injury taking place, a limit which the courts are strict in enforcing. To have any chance of success it needs to have an authoritative medical opinion that the injury was work-related and it also needs to be handled by a lawyer with experience of personal injury claims. Unfortunately the London Hazards Centre has seen many cases of individuals who have consulted local solicitors and spent large sums of money they can ill afford only to find they did not have a strong enough case to proceed. Legal aid is becoming increasingly less of an option.

Damages

If you bring a successful action against your employer a court will award damages which are supposed to compensate you for all you have lost and suffered. Damages fall into two main classifications as follows.

General damages

These are intended to compensate for pain and suffering, disablement, loss of the pleasures and amenities of life and future loss. Each case is viewed on its own facts and although the judge takes account of previous court awards the awards vary enormously from a few hundred pounds to several thousands. They are never enough to compensate and are often insulting.

Special damages

Special damages are awarded in respect of the actual financial loss and actual expenses incurred by the employee, as accepted by the judge. The awards may be paid in relation to an earnings period of a few weeks or of several

years. Again awards vary widely and each depends on the facts of the individual case.

Because legal proceedings are expensive most claims are settled out of court between the parties before the case comes to trial.

Damages in personal injury cases tend to be very low and in no way compare with the huge amounts paid out, for example, to the rich and famous in libel cases. And however large the amount, money is never sufficient to compensate for the pain and suffering, the damage to family and social life and the wrecking of career prospects caused by RSI.

The process of suing your employer is lengthy and stressful and may not be something that you wish to contemplate at a time when you may be feeling at your lowest ebb. However, since this avenue of redress is open to workers it may still be worthwhile pursuing it as the pressure from insurers may give extra impetus to employers to start taking prevention seriously, and you do have three years from the time you were first aware that your condition was work related in which to bring the claim. The insurers' voice is strong; according to the TUC over £3 million a year is paid out by insurers to RSI sufferers, mainly in out of court settlements.

Case law

There have been a number of legal cases in the last few years but the situation is still not clear cut. As already mentioned, most cases are settled out of court and there have been some well publicised large awards, for example, to PTC members Kathleen Tovey and Kathleen Harris, both typists at the Inland Revenue, who were awarded £82,000 and £79,000 respectively, or to Kath Watson, giro processing machine operator and CPSA member at the Benefits Agency, who was awarded £38,000 on the eve of the court hearing. UNISON won an out of court settlement of £60,000 for a council chainsaw worker. USDAW achieved two settlements of over £30,000 for check-out operators in the north-east of England and MSF won £72,000 for an industrial radiographer in Scotland.

According to the TUC, around 2,000 — 2,500 claims for RSI are pursued each year but only a handful proceed as far as a court hearing. The cases which are most likely to succeed are those in which there is a clearly diagnosed localised condition such as tenosynovitis or epicondylitis. Cases of diffuse RSI remain difficult to prove. The pronouncement by Judge Prosser in the Mughal v Reuters case that, 'RSI does not exist,' was unhelpful in this respect. Although the Prosser judgement was generally accepted by experts to be a maverick one, out of step with most current opinion, the fact remains that there have since been only two successful cases relating to diffuse RSI and they were won by industrial workers (Franklyn v Sun Valley Poultry and Montenay and others v Bernard Matthews). A further keyboard case of diffuse RSI (Moran v South Wales Argus) was, like Mughal v Reuters, lost. However, in the case of Pickford v ICI a secretary won her case at the Court of Appeal for writer's cramp caused by keyboard work.

At a briefing on RSI given to the London Hazards Centre in February 1996, Tom Jones of Thompsons Solicitors, one of the leading firms used by trade unions, stated that in his view diffuse RSI cases were likely to remain difficult. Effort had to be put into targeting doctors and consultants in areas where there were high RSI-risk workplaces to ensure they were fully briefed on RSI and were able and willing to recognise the symptoms.

He further warned that compensation awards were remaining pathetically low. The £1,000 limit below which no solicitors' costs would be awarded by a court meant that solicitors were becoming hesitant about taking on cases. The £1,000 limit, combined with the DSS recovery limit for benefits of £2,500, meant that many cases were either not being litigated or were limited in value. The cost of taking a claim often outweighed the likely compensation limit.

The London Hazards Centre has been alerted by RSI sufferers to the fact that solicitors are increasingly reluctant to take on their cases. Our advice to sufferers is to change their solicitor if this happens and they still wish to pursue their claim. One way to do this is to contact the Law Society's Personal Injury Panel on 0171 242 1222.

No fault compensation schemes

One solution to the problem of compensation would be for the government to introduce a national no fault compensation scheme such as exist in other countries, eg the Netherlands. In the absence of a national scheme, trade unions may be able to negotiate a local no fault compensation scheme with their employer. These schemes allow compensation to be paid quickly and without the stress, legal costs and uncertainty of litigation through the courts. The disadvantage of the schemes are that there is less pressure on employers to put prevention first and the amounts paid out tend to be lower.

At present there are few such schemes in the UK which cover RSI. A Labour Research Department survey in 1996 reported one scheme in existence at Aga Raeburn. The Inland Revenue have also introduced a scheme following the record awards to two of their employees and in the light of a further outstanding 200 claims being processed through the tax workers' union, PTC. The scheme covers all repetitive strain injuries, including diffuse RSI, associated with VDU and keyboard activities, including the use of a mouse.

Summary of compensation agreement on keyboard and workstation-related upper limb disorders between Inland Revenue and PTC

The scheme

- Members wishing to apply under the scheme submit a completed application form to the union. This is checked to ensure that it meets the requirements of the scheme and is then forwarded to the Inland Revenue.
- The Revenue then have an opportunity to accept or reject the application as falling within the scheme.
- If accepted, the case is then referred to one of an agreed panel of medical experts for a report. The report will address whether the injury falls within the qualifying list, the attributability to work, problems experienced by the individual as a result of the injury and the likely prognosis. The medical evidence forms the basis for calculating compensation under the scheme.

- There are provisions for either the Revenue or the applicant to challenge medical reports — up to three may be obtained in any one case, though the intent of the scheme is to use one agreed medical report.
- Within six months of the disclosure of relevant medical reports, compensation must be agreed, in accordance with an agreed formula and based on common law damages principles. Cases where the amount of compensation is disputed are to be referred to arbitration.

Benefits

- The scheme covers all cases diagnosed as an upper limb disorder caused or aggravated by work within Inland Revenue — this overcomes one of the major problems in most RSI legal cases.
- The scheme cuts out much of the adversarial nature of the present claims process, providing a balanced approach to instructing medical experts. It presents a fair alternative to court-based litigation.
- The scheme will ensure that cases can be resolved, and compensation paid quickly, with far less delay than going through the full common law procedures.
- The scheme does not affect members' entitlement to take their own case through normal legal channels — though it does restrict the circumstances in which the union can provide financial backing for such cases.
- The scheme has a schedule of legal costs laid down, limiting the exposure of both parties to large legal fees in addition to compensation payments — a significant saving with cases of such complexity which usually require the involvement of many specialists.
- The scheme will enable many to receive compensation who might otherwise have only obtained it after lengthy and expensive court battles with disputes because of uncertainties over the medical or other evidence.
- The scheme has been framed to include within it all the 200+ cases that are presently outstanding, providing that the member involved agrees.

Negotiating a compensation agreement

Some employers have accepted their responsibility for causing RSI and have been prepared to negotiate compensation terms for employees. One such was the *Financial Times*, where there was a huge incidence of RSI amongst journalists in 1987—1990. The NUJ was involved in protracted negotiations and the threat of strike action and management finally imposed the following terms in 1992:

- final decision on who should leave to be made by the company in the light of medical reports, including consultation with physiotherapists and other treating professionals
- ill-health pension, which is based on the actual service to date and potential service to normal retirement age, and on present salary, for those in the pension scheme
- a cash payment by the FT of at least 12 months' salary
- additional payments of £15,000—27,000 in several cases, depending on individual circumstances
- insurance benefit of 75 per cent of salary, less equivalent of state invalidity benefit, for the one person not in the pension scheme, plus payment of 24 months' salary
- an option to stay on staff for an additional six months, with a corresponding reduction in payment on departure
- a commitment to re-employment at the FT, subject to reasonable conditions, on full recovery
- membership of private medical scheme until the end of February 1993
- if in alternative employment, pension reduction which avoids a pound for pound cut and with no cut in the first year of re-employment
- no pension reduction if retraining
- no pension reduction for the one person near normal retirement
- assurances of the company's intentions on final pension when normal retirement age is reached, subject to Inland Revenue rules at the time
- professional career counselling and financial advice
- possible job interviews at other FT-related companies

The *Financial Times* is obviously a special case, but these terms could be used as a bargaining lever against an employer who is trying to retire staff on medical grounds.

Suing for unfair dismissal

If your employer has dismissed you because of your RSI, you may be able to take your case to an industrial tribunal and sue for unfair dismissal. However you need to seek legal advice from your trade union or a law centre about this since, if you are unfit to do the job for which you were employed, and your employer went through the accepted procedures, your dismissal may be deemed fair. Even if the dismissal is found to be unfair you cannot win your job back.

The Disability Discrimination Act 1995 may be of benefit to RSI sufferers in the future as it requires employers to consider reasonable adjustments to the workplace, workstation or working arrangements where an employee is defined as disabled. So the Act should be used to press the employer to find alternative work or working arrangements for employees who have been disabled with RSI by their work rather than resort to dismissal.

In a somewhat different case, an Industrial Tribunal found that a TGWU safety representative at a poultry company had been unfairly dismissed for advising staff about the risks of RSI. The representative had given the advice when workers were processing 12,200 birds an hour whereas the agreed speed of the line was 9,500 birds an hour. The company had claimed he had told them to go slow. The company was ordered to pay the representative £8,750 in damages.

SEEKING STATE COMPENSATION

The second source of compensation is the state benefits system which is administered by the Department of Social Security. Again claims can be difficult and long drawn out.

Industrial Injuries Benefit

This is paid to people who have been injured or made ill through their work. It is only paid if you are suffering a prescribed industrial disease ie a disease

prescribed by the Industrial Injuries Advisory Council and officially recognised as work related. Not many RSI conditions have been prescribed. Those that have are shown in Table 3.

In order to claim under the scheme you must fill in the appropriate form, BI 100B, which can be obtained from your local DSS office. You have to show that you are suffering from the prescribed disease, that you are in an occupation prescribed for that disease and that the disease was caused by that occupation. If you have not entered the details in your employer's accident book you may have difficulty proving the claim. If the claim is accepted you will have a medical examination to assess the extent to which you are disabled by the disease. Benefit is only paid where disability is 14 per cent or more and the amount depends on the percentage. Even sufferers of RSI so severe that they cannot lift a toothbrush to brush their teeth are generally assessed at between 8 and 12 per cent disabled. However, it is worth submitting a claim even if you think your disability is less than 14 per cent because future benefits may be affected. There are time limits for submitting claims, usually six months, so you will need to check carefully and act promptly.

Table 3: Prescribed diseases and related occupations

Disease number	Name of disease or injury	Type of job (any job involving)
A4	Cramp of the hand or forearm due to repetitive movements eg writer's cramp	Prolonged periods of handwriting, typing or other repetitive movements of the fingers, hand or arm eg typists, clerks and routine assemblers
A5	Subcutaneous cellulitis of the hand (beat hand)	Manual labour causing severe or prolonged friction or pressure on the hand, eg miners, road workers using picks and shovels

A6	Bursitis or subcutaneous cellulitis at/about the knee (beat knee) eg housemaid's knee	Manual labour causing severe or prolonged external friction or pressure at/about the knee, eg workers who kneel a lot
A7	Bursitis or subcutaneous cellulitis at about the elbow (beat elbow)	Manual labour causing severe or prolonged external friction or pressure at/about the elbow, eg jobs involving continuous rubbing or pressure on the elbow
A8	Traumatic inflammation of the tendons of the hand or forearm, or of the associated tendon sheaths (tenosynovitis)	Manual labour or frequent or repeated movements of the hand or wrist, eg routine assembly workers
A12	Carpal tunnel syndrome	The use of hand-held powered tools whose internal parts vibrate so as to transmit that vibration to the hand, but excluding those that are solely powered by hand

Clawback

The Conservative Government introduced an extremely meanminded and unfair requirement that benefits must be paid back in full if you subsequently receive a civil compensation award of more than £2,500. In a reply to an MP's question it was reported that the DSS Compensation Recovery Unit was clawing back £¼ million a year from RSI sufferers' compensation awards. The Government later announced plans for reform but these did not go far enough.

Other benefits

Other benefits to which you may be entitled are:

- incapacity benefit (replaced sickness benefit and invalidity benefit from April 1995) — if you are not capable of working
- disability working allowance — if you can work but your earning capacity is limited by your disability
- disability living allowance — if you need help with personal care or mobility

You should also check your entitlement to sick pay under your employer's own scheme and to statutory sick pay. Your employer may also have a personal health insurance scheme which covers you so you should check that too.

PREVENTION NOT COMPENSATION

Obtaining compensation by whatever route is long, complex and likely to yield inadequate results at the end. In any case money is no real compensation for the pain and damage to career prospects, home and social life. It is no recompense for the loss of the job you loved, for the inability to pick up and cuddle your own baby, for the loss of freedom to continue to pursue recreational interests without pain, for the inability to carry out the everyday tasks that everyone else takes for granted, and for the anxiety of being dependent on the continued support of family and friends. While the struggle for improved compensation for victims must, of course, continue, this must never become a substitute for the fight for proper preventive measures in the workplace by employers.

10

CAMPAIGNING PRIORITIES FOR THE FUTURE

It is quite appalling that although the risk factors for RSI are so well established the number of cases continues to rise. While this handbook sets out a range of suggestions for tackling RSI now by organising and negotiating in the workplace, there are a number of other issues that are longer term campaigning targets. These include:

- the political will to make strong enforcement of health and safety a priority issue
- more government funded resources for the enforcing authorities such as HSE
- tougher penalties for employers who break health and safety law and cause injury and ill-health to their employees
- stricter requirements for ergonomic principles to be incorporated into the design of work equipment, workplaces and jobs
- improved employment rights so that people are not so afraid of losing their job that they do not report RSI symptoms until it is too late
- properly funded research into the pathology of RSI and the most effective treatments for it
- the ratification and implementation of the International Labour Organisation convention on occupational health services
- compulsory occupational health training for medical practitioners
- the creation of a network of NHS multi-disciplinary specialist RSI clinics involving physiotherapists, rheumatologists, and psychologists who can adopt a holistic approach to the treatment of RSI
- the establishment of more specialist pain management clinics which can deal with the special needs of RSI sufferers in chronic pain
- more resources for NHS physiotherapy departments with more NHS physiotherapists being trained in specialist skills for RSI treatment

- public funding for more Occupational Health Projects such as the ones in Sheffield, Leeds, and Camden and Islington, so that more information on RSI can be disseminated directly to GPs, practice nurses and patients
- public funding for worker oriented health and safety advice centres
- public funding for organisations such as the RSI Association to enable them to continue to provide advice and support to RSI sufferers
- a comprehensive review of industrial injury compensation provisions, including the abolition of the 14 per cent disability rule
- no clawback

Tackling RSI effectively in the longer term is not just a matter of workplace organisation, important though this is. Organisations concerned with RSI will need to continue to develop campaigning strategies to achieve these targets and to work co-operatively in their campaigns. We hope that this book will stimulate such campaigns and provide useful ammunition for the campaigners.

11

REFERENCES AND SOURCES OF INFORMATION

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An office workers' guide to work related upper limb disorders (1996), City Centre

Injuries at work and work related illness (1994), Thompsons

RSI-UK is an Internet mailing list and World Wide Web site (http://www.demon.co.uk/rsi) for discussion on RSI. Contact ellen@tictac.demon.co.uk or telephone 0171-281 4830 for details.

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USEFUL CONTACTS

Association of Personal Injury Lawyers (APIL), 10a Byard Lane, Nottingham, NG1 2GJ; Tel: 0115-958 0585

Chartered Society of Physiotherapy, 14 Bedford Row, London WC1H 4ED; Tel: 0171-242 1941

Computability Centre, PO Box 94, Warwick, Warwicks CV34 5WS; Tel: 01926-312 847. Information on computer workstations, keyboards, voice recognition software etc

Construction Safety Campaign, 255 Poplar High Street, London E14; Tel: 0171-537 7220

Disabled Living Foundation, 380-384 Harrow Road, London W9 2HU; Tel;: 0171-289 6111

Ergonomics Society, Devonshire House, Devonshire Square, Loughborough LE11 3DW; Tel: 01509 234 904

National Group on Homeworking (NGH), 30-38 Dock Street, Leeds LS10 1JF; Tel: 0113-245 4273

Pain Society, 9 Bedford Square, London WC1B 3RA; Tel: 0171-631 1650

RSI Association (RSIA), Chapel House, 152/156 High Street, Yiewsley, West Drayton, Middlesex UB7 7BD; Tel: 01895-431 134

Society of Teachers of the Alexander Technique, 20 London House, 266 Fulham Road, London SW10 9EL

Hazards centres and occupational health projects

West Midlands Health and Safety Advice Centre (HASAC), Unit 304, The Argent Centre, 60 Frederick Street, Birmingham B1 3HS; Tel: 0121-236 0801

Bradford Occupational Health Project, 23 Harrogate Road, Bradford, South Yorkshire BD2 3DY; Tel: 01274-626 191

Camden & Islington Occupational Health Project, St. Pancras Hospital, 4 St. Pancras Way, London NW1 OPE; Tel: 0171-530 5421

City Centre, 2nd floor, Sophia House, 32/35 Featherstone Street, London EC1 8QX; Tel: 0171-608 1338/9

Health and Safety Project, Trade Union Studies Information Unit, Mari House, Old Town Hall, Gateshead NE8 1HE; Tel: 0191-478 6611

Hull and District Trades Union Council Action on Safety and Health (HASH), 231 Boulevard, Hull HU3 3EQ

Keighley Trades Council Health and Safety Campaign, Keyhouse Project, Low Street, Keighley; Tel: 01535-691 264

Leeds Occupational Health Project, Leeds Family Health, Brunswick Court, Bridge Street, Leeds LS2 7RJ; Tel: 0113-245 0271

Liverpool Occupational Health Project, c/o National Bank Buildings, 24 Fenwick Street, Liverpool L2 7NE; Tel: 0151-236 6006

London Hazards Centre, Interchange Studios, Dalby St, London NW5 3NQ; Tel: 0171-267 3387; E-mail LONHAZ@MCR1.poptel.org.uk or lonhaz@gn.apc.org

Lothian Trade Union and Community Resource Centre, Basement, 26/28 Albany St, Edinburgh EH1 3QH; Tel: 0131-556 7318; E-mail: LOTHIAN-TUCRC@geo2.poptel.org.uk

Manchester Hazards Centre, 23 New Mount Street, Manchester M4 4DE; Tel: 0161-953 4037

Portsmouth Area Work Hazards Group, 11 North End Grove, North End, Portsmouth PO2 8NF

Sheffield Occupational Health Project, Mudford's Building, 37 Exchange Street, Sheffield S2 5TR; Tel: 0114-275 5760

South West Action on Safety and Health, 16 Woodwater Lane, Exeter, Devon EX 5LL

Southampton Area Hazards Group, 2 Cranberry Close, Marchwood, Southampton SO40 4YT

Walsall Action for Safety and Health, 7 Edinburgh Drive, Rushall, Walsall WS4 1HW; Tel: 01922-25860

Local RSI support groups

BIRMINGHAM: Ms. Margaret Langley, 55 Essex Road, Four Oaks, Sutton Coldfield, West Midlands B75 6NR; Tel: 0121 308 1439

BLACK COUNTRY: June Kimber, National Union of Lock and Metal Workers, Bellamy House, Wilkes Street, Willenhall, West Midlands WV13 2BS; Tel:01902-266 651

BRADFORD: Mrs Jacki Smith, 24 First Street, Low Moor, Bradford, West Yorkshire BD12 0JQ; Tel:01274-607 833

CAMBRIDGE: Pery Burge, 319 Milton Road, Cambridge CB4 1XQ; Tel: 01233-420 254

CATERHAM: Elaine Thompson; Tel: 01883-342 264. Meetings on first Monday of each month at The Louise Miller Salon, 15 Raglan Precinct, Town End, Caterham-on-the-Hill, Surrey CR3 5UG

CHELTENHAM: Julie Baggot; Tel: 01242-514 215

CHORLEY: Ms J Gregory, 12 Milton Road, Coppull, Chorley, Lancashire; Tel: 01257-794 021

EALING: Kathy Ludbrook, 127 Seaford Road, West Ealing, London W13 9HS; Tel:0181-579 3466

ISLE OF MAN: Mrs M Kennish, 12 Beech Avenue, Birch Hill, Onchan, Isle of Man; Tel: 01624-672 022

KEIGHLEY: Ms Sandra Mitchell, Temple Row Centre, Keighley, W Yorks BD21 2AH; Tel: 01535-606 700

KENT: The Physiotherapy Centre, Brenchley House, The High Street, Sittingbourne, Kent ME10 4AW

LEICESTER: Joan Maginn; Tel: 0116-288 6222

LIVERPOOL: contact Liverpool Occupational Health Project (see above)

LONDON: Sylvia Dennerstein; Tel: 0181-800 5049. Meetings last Thursday of every month 7 pm at National Union of Journalists, Acorn House, 314 Grays Inn Road, London WC1

MANCHESTER: c/o Brian Thompson & Partners, 4th floor, Acresfield, Exchange Street, off St. Ann's Square, Manchester; Tel: 0161-834 5929. Drop-in Tuesdays 11 am — 2 pm

MID-CHESHIRE: Mrs Dorothy Clarke, 1 Cumbermere Drive, Elworth, Sandbach, Cheshire CW11 9TH; Tel: 01270-766 913

NORTH STAFFS: Mrs M Johnson, 6 Aveling Green, Sneyd Green, Stoke-on-Trent ST1 6LB; Tel: 01782-206 045

NORWICH: Mrs E Witt, Occupational Health Nurse, Anglican Windows, PO Box 65, Norwich N16 6EJ; Tel: 01603-422 543

NOTTINGHAM: Mrs Wendy Lawrence, 26 Balmoral Road, Colwick, Nottingham NG4 2GD; Tel: 0115-987 0247

RUGBY/COVENTRY: Peter Hurst; Tel: 01455-552 563

SHEFFIELD: Contact Sheffield Occupational Health Project (see above). Meetings held 3rd Wednesday in month at 7.15 pm

SOUTH LANCASHIRE: T Crowne, Trades Union Group, 14 Newman Street, Burnley BB10; Tel: 01282-4522 167

ST. ALBANS: Janet Gibbs, 71 Broadstone Road, Harpenden, Herts AL5 1RE; Tel: 01582-715 697

ST. HELENS: Lynne Phillips, St. Helens Community Support Centre, 7 St. George's Street, St. Helens, Merseyside WA10 1DA; Tel: 01744-453 814

STOKE-ON-TRENT: c/o W Edmondson, Potteries Action on Safety and health, 16 Fieldway, Blurton, Stoke-on-Trent ST3 2AN; Tel: 01782-327 144

SWINDON: Ms Helen Wiltshire, 43 Pheasant Close, Covingham, Swindon, Wiltshire SN3 5HT

WIGAN & DISTRICT: Dave Hibbert, RSI Network, TUC Education Unit, Wigan and Leigh College, 1 Parson's Walk, Wigan WN1 1RS; Tel: 01942-501 501

WORTHING: Sylvia Dorey; Tel: 01903-213 434

Trade unions

Trades Union Congress (TUC), Congress House, Great Russell Street, London WC1B 3LS; Tel: 0171-636 4030

Scottish TUC, Middleton House, 16 Woodlands Terrace, Glasgow G3 6DF; Tel: 0141-332 4946

Wales TUC, Transport House, 1 Cathedral Road, Cardiff CF1 9SD; Tel: 01222-372 345

Irish Congress of Trade Unions, 19 Raglan Road, Dublin 4, Ireland; Tel: 0001-081 680 641

Irish Congress of Trade Unions, Northern Ireland Committee, 3 Wellington Park, Belfast BT9 6DJ; Tel: 01232-681 726

Enforcement agencies

Enforcement is the responsibility of the Health and Safety Executive (HSE) and local authority environmental health departments.

HSE, INFOLINE, Tel: 0541 545500

General information on hazards and health and safety

Daily Hazard, Newsletter of the London Hazards Centre (four issues per year).

HAZLIT is the London Hazards Centre library database. For more information about on-line access, contact the London Hazards Centre.

Hazards, (four issues per year), PO Box 199, Sheffield S1 1FQ

Labour Research and *Bargaining Report*, monthly magazines from Labour Research Department, 78 Blackfriars Road, London SE1 8HF

Workers' Health International Newsletter, c/o *Hazards*, P O Box 199, Sheffield S1 1FQ

HSE free leaflets and priced publications can be ordered from:

HSE Books, PO Box 1999, Sudbury, Suffolk CO10 6FS; Tel: 01787 881165

London Hazards Centre publications

Asbestos Hazards Handbook: a guide to safety at work, in the community and at home, £12.00 (£5.00 to trade unions and community groups)

Hard Labour: Stress, ill-health and hazardous employment practices, £6.95

VDU work and the hazards to health, £6.50

Protecting the Community — A worker's guide to health and safety in Europe, £2.00

Basic Health and Safety: Workers' rights and how to win them, £6.00

Sick Building Syndrome: Causes, effects and control, £4.50

Toxic Treatments: Wood preservative hazards at work and in the home, £5.95

Fluorescent Lighting: A health hazard overhead, £5.00 (£2.00 to trade unions and community groups)

The London Hazards Centre also publishes a series of factsheets on hazards issues.

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