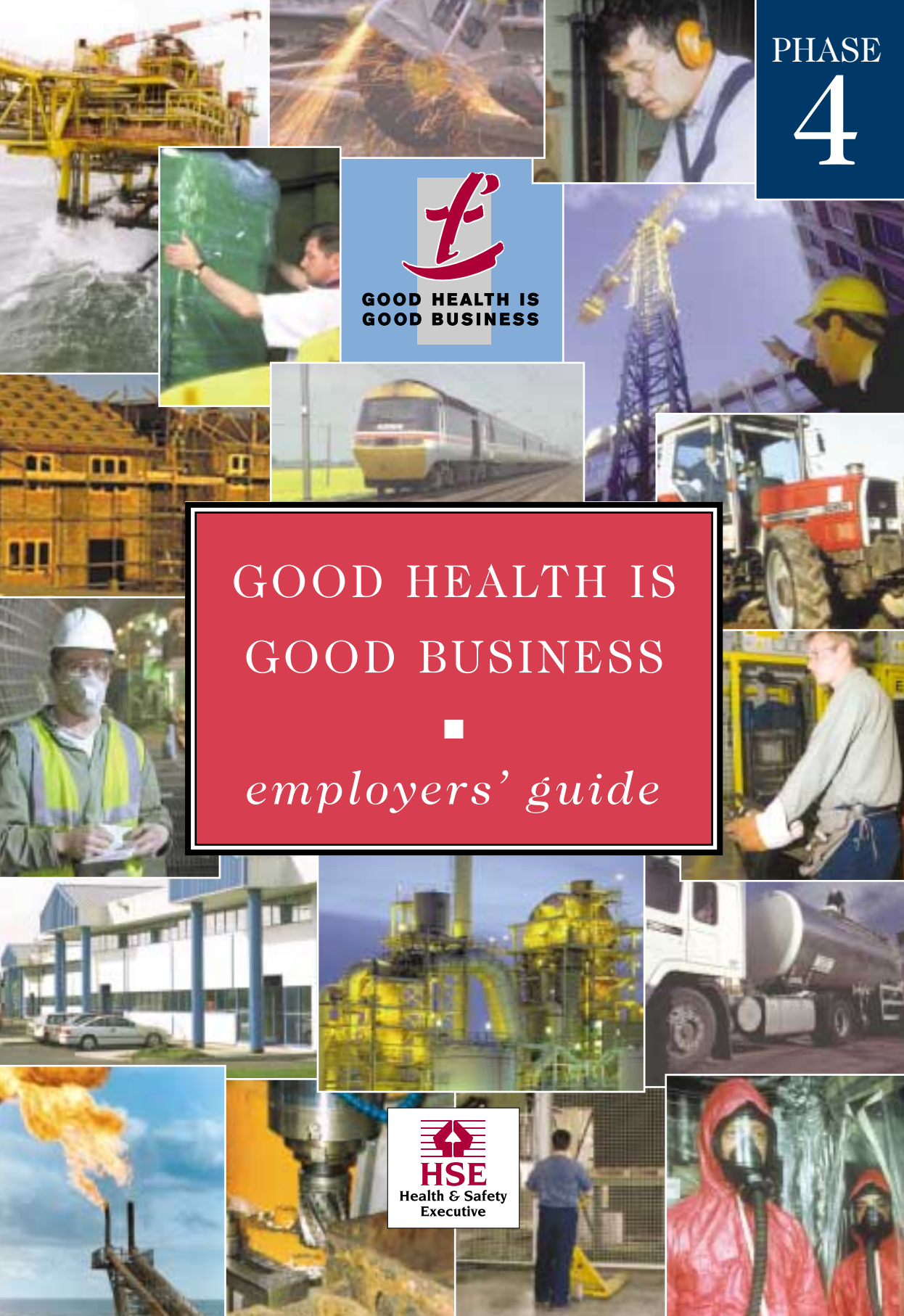


PHASE 4

GOOD HEALTH IS GOOD BUSINESS

GOOD HEALTH IS GOOD BUSINESS

■

employers' guide

HSE
Health & Safety Executive

As the newly appointed Chair of the Health and Safety Commission I am pleased to welcome you to Phase 4 of the Health and Safety Executive's largest ever campaign - *Good Health is Good Business*. The campaign is designed to stop people being made ill by their work.

As a manager you have responsibilities to manage your activities to prevent work-related ill health. As well as protecting the health of your employees and complying with the law, good health will bring benefits to your business. My background as an economist gives me a particular interest in the *Good Health is Good Business* principle and the benefits that can be achieved for individual workers, business and society at large. Investing in good health risk management can be a major contributor to the success of business, and during the campaign many managers have demonstrated that it is. You too can make it happen in your workplace and HSE can help you do this.

There is a wide range of potential health risks in workplaces as this guide explains. They can be managed in ways which need not be costly or difficult. To show this the campaign has focused on specific health risks. Phase 1 focused on noise, musculoskeletal disorders and respiratory sensitisers. The subsequent phases added to this. Phase 2 dealt with work-related dermatitis and work-related cancer, including asbestos. Phase 3 covered hand-arm vibration syndrome and industrial solvents. And in this new phase - Phase 4 - HSE will build on the activity of previous phases to persuade managers to take action on all these health risks. If standards are not maintained HSE will take action which could ultimately lead to employers being prosecuted.

Many managers have continued to support HSE's campaign but a lot more needs to be done. You can take part by reading this booklet, getting more information and making improvements in your own workplace. You can also help and encourage others to do likewise. The booklet tells you what you need to do to start with and where to get further help and advice. We will also continue to run seminars and workshops in partnership with other organisations. Look out for our adverts and articles in the press.

Good Health really does mean Good Business for everyone - so make it happen in your workplace.

Bill Callaghan

BILL CALLAGHAN
Chair, Health and Safety Commission

HEALTH RISK MANAGEMENT

Preventing work-related illness

An estimated two million people suffer from ill health caused by work. Some 18 million working days are lost each year as people take time off because work has made them ill.*

So, no matter what business you are in, work-related illness should concern you as a manager. It can occur in any size of company - even the smallest. Indeed, the smaller your company the greater the impact will be if your staff are made ill. Work-related illness can also take many different forms.

The problems may go unnoticed, slowly getting worse over time until the illness caused becomes permanent and possibly disabling. In some instances problems can even lead to death.

This unnecessary effect on employees' health costs society up to some 11 billion pounds each year.† Do you know what work-related illness costs you in sickness absence; lost production; retraining; administration; or increased insurance premiums, to name but a few? But both the pain and suffering and financial losses can be avoided by companies who understand the causes of work-related ill health and take steps to manage and prevent it.

The Health and Safety Executive is running a major campaign to help you as a manager manage the health risks in your workplace. This guide introduces health risk management and points you in the direction of further help and advice. Managing health risks need not be difficult or costly - you can do it - and you will be taking part in the HSE campaign.

** Figures based on 1995 self-reported work-related illness survey*

† Figures based on the costs to Britain of workplace accident and work-related ill health report 1995/96

Prevent ill health caused by work today and start protecting your staff and your profits.

WHAT IS WORK-RELATED ILLNESS?

Work-related ill health, also known as occupational ill health, describes any illness an employee suffers because of the hazards they have been exposed to at work. Work-related illness is often viewed as the domain of specialists. Actually it is your responsibility as an employer to manage your activities and stop your employees being made ill by their work.

As you can see from the examples in the chart opposite, there is a wide range of health risks capable of causing a variety of illnesses. This list is not exhaustive - if you do not recognise a risk it does not mean your staff are safe. You can use this list to start thinking about the types of problems you might find in your workplace. Remember - even smaller businesses such as garages, hairdressers and farms are at risk.

HEALTH RISK	ILL-HEALTH EFFECTS
Handling heavy or awkward loads. Poor work postures; repetitive or forceful movements; a combination - eg repetitive assembly and inspection work.	Musculoskeletal disorders - eg bad backs; pains, strains and sprains; 'RSI'; upper limb disorders.
Breathing in and handling hazardous substances - eg asbestos; solvents; isocyanates, wood, grain and silica dust; sheep dips; other chemicals.	Cancer; asthma; bronchitis; fibrosis; poisoning; dermatitis; burns.
High noise levels - eg from noisy tools and machinery.	Deafness; tinnitus.
Vibration - eg from hand-held tools; regularly driving vehicles.	Vibration white finger with pain in fingers and loss of grip; low back pain from whole body vibration.
Exposure to radiations - eg from x-ray work; ultraviolet radiation from prolonged outdoor work; infra-red; lasers.	Burns; skin complaints; eye damage; cancer.
Exposure to biological agents - viruses, bacteria, fungi and parasites - eg in health care, agricultural and laboratory work.	Mild sickness to serious diseases - eg orf; hepatitis B; legionnaires' disease.
Stressors - eg excessive workload or work pace; conflicting priorities.	Can contribute to high blood pressure; heart disease; depression.

MANAGING THE HEALTH RISKS

Whatever the health risk, the way to prevent ill health is the same - good management. Health risk management is about identifying and controlling risks before they cause problems and lead to losses. The stages are outlined below:

1 FIND OUT IF YOU HAVE A PROBLEM

- Take a fresh look at your workplace to find out what hazards your employees face. Watch them at work - look at how they work and what they work with.
- Talk to your staff, find out if their work is affecting their health - remember, even trivial complaints can become major problems.
- Look at your sickness absence records for clues.
- Get advice from suppliers on working with their materials. Look at the hazard information on safety data sheets and manufacturers' and suppliers' guidance. Remember - not all hazards to health are obvious.

2 DECIDE WHAT ACTION TO TAKE

- Look at the hazards and decide who might be at risk and how: carry out a risk assessment.
- Decide whether existing precautions are adequate - should more be done?
- Identify what steps need to be taken to remove or control the risks.
- Decide which health risks should be given priority for action.

3 TAKE ACTION

- Make the improvements you decide are necessary.

4 CHECK WHAT YOU HAVE DONE

- Check that any targets you set to reduce health risks have been reached.
- Make sure control measures, eg ventilating plant, automated manual handling equipment, are maintained and working properly.
- Check sickness absence records for improvements and discuss the changes with your employees.
- Ensure personal protective equipment is used properly and maintained in good working order.

Of course, good management is an ongoing process. You will need to revisit these steps when you make changes in your workplace, for example when considering new equipment or processes. Good health risk management will anticipate problems rather than deal with them after you have made an investment and find your staff becoming ill.

CASE STUDIES

Crack Processing Ltd

Crack Processing Ltd have been contract manufacturers and packers of a range of chemicals and industrial products for more than fifty years. They take seriously their legal duties under the Control of Substances Hazardous to Health Regulations (COSHH) and have procedures to assess risks before processing materials.

Dr Andrew Brown, director, said "We handle an enormous variety and ever-changing number of chemicals - from agrochemicals to soap powders. We also process materials in a variety of ways including blending, coating, milling, screening and repackaging."

Dr Brown became aware that HSE were piloting a streamlined process for helping small and medium sized companies carry out COSHH assessments called **COSHH Essentials** (an HSE publication) and decided to try it out.

Dr Brown says: "Previously, as the only person with a chemical background, I had to carry out a complex COSHH assessment on every material we handled. Our new system based on **COSHH Essentials** has enabled me to concentrate on more complex issues and delegate part of this responsibility without compromising safety and has saved time."

"I think **COSHH Essentials** is a really useful tool. It is refreshing to find a model which simplifies the whole process and allows everyone to share information in order to work in a safe manner."

Manual handling at an NHS Community Trust

After two healthcare staff suffered serious back injuries in separate incidents on the same ward HSE took enforcement action requiring assessment and the elimination or control of manual handling risks at an NHS Community Trust. They had been helping patients with Alzheimer's Disease to use the toilets. The ward had five toilets, all of which were very poorly designed and made it difficult for staff to manoeuvre patients without putting themselves at risk. In particular the pan was in the corner, which made access difficult, the floor had poor slip resistance and the light switch was behind an inward-opening door. Spills onto the floor were frequent and it was unclear whether the nurses or cleaners were responsible for mopping up.

The manager set up an action group to review health and safety management controls. Risk assessments were carried out and meetings were held involving for the first time representatives for both nursing and domestic staff. The assessments showed that only two toilets were really necessary but moving the toilet pans to a more appropriate position would be expensive. The Trust decided to upgrade two of the five toilets, turn two others into much needed linen stores, and make the fifth a visitors' toilet.

In the two patient toilets, the pan was moved to the centre of the back wall, a new slip-resistant floor and state-of the art grab-rails were fitted, the door was re-hung to open both inwards and outwards, sensor-lights were installed and pictograms were placed on the door to remind staff to mop the floor after spills.

The work cost £6000. However, the risk of injury and consequent litigation has been greatly reduced. The handling of the patients has also improved and the ward has two new cupboards and, for the first time a visitors' toilet. The involvement of all ward staff has broken down barriers between cleaners and nurses and allowed issues to be addressed constructively. Ward morale has improved. The Trust considers that the outcome has been excellent value for money. All involved are delighted with how a bit of imaginative thinking turned a "problem" into an opportunity.

Palletising sheet product in the rubber industry

Two workers were employed stacking sheets of foam rubber on to pallets. The process required the sheets to be lifted at a rate of two to four per minute for an eight hour shift. Both workers had complained of muscular pains associated with performing this task, the taller complaining of low back pain from stooping, and the shorter of shoulder pain from repeated lifting above shoulder height.

The company recognised the risks associated with this task, and the fact that the machine's productivity was being limited by the rate of manual stacking. A palletiser has now been installed. The company and workers both agree that this investment has led to a great improvement, both in terms of productivity and improved working conditions.

Repeated lifting of moulds in and out of loose mould presses

The production of rubber closures at one factory created a number of handling problems. The moulds weighed up to 45 kg and had to be manually lifted into the press every seven to eight minutes. Levering the moulds apart had a jarring effect on the operators' wrists and arms, and trimming the mouldings involved repetitive movements of the lower arm, wrists and hands. Several staff had made compensation claims against the company for the injuries they had received.

The company re-engineered the whole process to eliminate or reduce these problems as far as they could. They replaced the old tooling with a three part mould. The top part was secured to the top platen, the bottom part was fixed to a slide, so then only the lightweight centre section required lifting out. The new mould did not require any levering apart and was designed to create a tear trim, so the closures do not require any further manual trimming. These improvements have reduced the handling risks considerably and increased productivity. They have been so successful that 85% of the remaining press tools are going to be modified in the same way.

Elimination of grinding and acetylene burning.

At Adtranz in Crewe, work on the refurbishment of railway vehicles involves the removal and replacement of the corroded lower sections of steel frames which form the coach end corridor connections. Originally, the corroded section was burned out by hand, using an acetylene torch; the remaining material was then ground back to the required dimensions using a hand-held angle grinder. As a result of an initiative within the company to identify and control exposures to hand-arm vibration, members of the workforce proposed that the process was automated.
The corroded material is now removed from the coach end frames using an existing Computer Numerically Controlled milling machine. This has produced a better finished product, is faster, and has eliminated the requirement for burning and has significantly reduced the need to grind by hand, together with an associated reduction in health hazards.

Solvents - Controlling exposure to white spirit

Employees from a company manufacturing white spirit based aluminium pigments complained to HSE about skin problems. The company thought that exposure to aluminium oxide was the principal risk requiring control, but HSE inspectors identified a failure to control exposure to white spirit and the necessary enforcement action was taken.

Areas of principal concern were the press rooms where a process ("dropping the presses") requiring aluminium pigment paste to be manually scraped from vertical presses and dropped into floor level drip trays was undertaken. The hosing down of white spirit drums which formerly contained pigment was also carried out. Personal exposure levels in the press area were in the order of 130-140 ppm white spirit in the air and unsuitable respiratory protective equipment (in the form of dust masks) was provided for protection against aluminium powder. A personal exposure level of 244 ppm white spirit in the air was measured during the hosing down of the drums. An air-fed visor was provided for this work.

The company made various improvements including implementing a package of controls for "dropping the presses". These included enclosing

each press with a nylon curtain to restrict the spread of vapour and providing the presses with local exhaust ventilation to remove vapour from the enclosure. Operators were also provided with air-fed respiratory protective equipment for which there is an excellent maintenance and storage regime. The company is also investigating other engineering measures to control white spirit emissions, as well as investigating the possibility of replacing the white spirit with an aqueous medium.

Instead of hosing down drums the company has invested in an automatic drum washing machine. Apart from separating the operator from the hazard, this cleaning method provides a superior finish.

Perhaps the most pleasing outcome was the response of the workforce who welcomed the improvements. Also the company has now adopted a far more proactive approach to health and safety matters with various staff attending training courses.

Dermatitis - check the staff are taking the necessary precautionary measures

Hairdressers are at high risk of developing either irritant or allergic contact dermatitis from frequent exposure over long periods to hairdressing products such as shampoos, dyes, bleaches, soaps and detergents.

A 17 year old apprentice hairdresser developed irritant dermatitis shortly after starting work at a hairdressers in Suffolk and had to take time off work. Her duties included shampooing and dying hair. She had been made aware of the risks of dermatitis during her training course at college and although protective gloves and hand creams were provided at the salon she had declined to use them. The manager at the salon had not checked that they were being used.

As a result of this incident the manager discussed the risks of dermatitis with all the staff and emphasised the importance of wearing gloves particularly when handling bleaches and other colouring agents.
The manager now regularly checks that staff are using the gloves.

The apprentice's skin problems have cleared up and have not recurred.
There have been no further cases of dermatitis at the salon.
This demonstrated the importance of not just providing protection but also making it sure it is used.

The Cheese Company, Reece's Creamery, Cheshire

The Cheese Company is committed to risk reduction and supports HSE's *Good Health is Good Business* campaign. Our positive attitude to tackle occupational health across the company has helped to reduce accidents by 40 per cent against an increase in productivity of 25 per cent.

A comprehensive programme of risk assessments carried out, some 900 across ten sites, identified the key areas where we should invest our time and money to achieve a reduction in accidents and improve efficiency.

A broad range of projects have been progressed. Examples include: the installation of mechanical lifting assistance through the use of vacuum lifting heads at our Taw Valley Creamery in Devon and Oswestry packing facility in Shropshire. In both instances, 20kg of cheese blocks are being transferred from pallets to conveyors. End of line scissors lifts and adjustable pallet trucks have also been installed, and similar equipment is expected to be utilised at other sites when trials are complete. At our Cheshire site, Reeces of Malpas, projects are underway to upgrade cheese milling and pressing operations, reducing pulling and handling.

Stilton Cheese packing at the Tuxford and Tebbutt Creamery, Leicestershire, a traditionally multi-handling operation, has been modernised by the installation of cheese sorting and boxing equipment. Staff have also received information and training on improved ways to 'paste, dress and finish' Stiltons, which has greatly reduced the risk of injuries.

Gordon Bell, Health, Safety and Environmental Manager

Virgin Atlantic

"We are fully supportive of HSE's initiative and have participated in the European Weeks for Safety & Health. Although we regard health and safety as a year round activity, this type of event provides a focus and helps to raise awareness.

Our aim is to promote health and safety within Virgin Atlantic as well as getting local companies to consider their own health and safety management. For example, we held a breakfast briefing which engendered a feeling of mutual assistance between organisations geographically local to each other, despite being fundamentally different business operations.

Virgin will always take the opportunity to participate in HSE's campaigns. When confronted with statistics like twenty four million working days lost due to workplace accidents and illness in the UK, every responsible employer must realise the shared benefits of co-operating with neighbours and fellow business colleagues.

I commend such initiatives and can verify that real benefits can be gained. Risk asssessment, loss reduction and hazard identification are becoming accepted as part of day to day working activities. Sharing these lessons with small business and contractors will yield benefits not only for the company, but the wider community which extends throughout the UK and Europe"

Russ Timpson Safety, Health and Environment Manager

In one Midlands factory, excess material from a component casting process was removed using a large pedestal grinder. The operator had to hold each component firmly and then push it against the grinder and its support. Vibration to the hands was extremely high, mainly because the support was poorly built. A new support was constructed which brought the amount of vibration well within acceptable levels.

- By reviewing their use of chemicals, a fish processing company helped safeguard their workers' health and made cost savings at the same time. Following the Control of Substances Hazardous to Health (COSHH) Regulations, they stopped using chemicals that were not essential to the processing, and found less hazardous alternatives to replace others. They not only reduced the risk of ill health, but saved money and storage space by using a smaller range of chemicals.

- A company with loud machines wanted to reduce noise levels to below 90dBA. The workforce played a major part in the design and development of noise enclosures which were fitted around noisy machines. The noise levels were checked to see if the target had been reached - it had. The workforce felt that management had demonstrated that they were serious about improving working conditions.

- Operators assembling transmission housings for helicopters used a ratchet spanner to screw in steel pegs. Several operators reported elbow and upper arm pain. The task involved a lot of forceful, awkward and repetitive movements, which could have lead to serious upper limb disorders.

  The company introduced pneumatic nut runners costing about £130. These screwed in the pegs with a simple squeeze of the trigger. As well as reducing the reports of pain and stopping the problems worsening, the company found the unit assembly time nearly halved, and the product quality improved.

- A company installed ventilation equipment to control the dust made when weighing out powdered chemicals. To make sure the equipment was effectively reducing dust levels, the air flow rates of the ventilation equipment and airborne levels of the chemicals handled were routinely measured. A fall in air flow rates or high levels of dust triggered an investigation to find out why the control equipment was not working properly.

MUSCULOSKELETAL DISORDERS

The problem

Musculoskeletal disorders account for more cases of work-related ill health in Great Britain than any other health hazard. It is estimated that around 1.2 million individuals in Great Britain suffer from musculoskeletal disorders caused by their work, resulting in an estimated 10 million working days lost.* Musculoskeletal disorders were by far the most common condition in the 1995 survey of self reported work related illness. Around half the respondents reported suffering from musculoskeletal disorders for over five years.

The risks and ill-health effects

Musculoskeletal disorders describe a variety of strain, sprain and over-use problems affecting the body's muscles and joints. The back, neck, shoulders and upper limbs are particularly at risk. Problems include everything from slipped discs, to upper limb disorders, (such as tenosynovitis, "repetitive strain injury (RSI)", pain and loss of strength in the arms and hands, pain, numbness, swelling and tingling in the hands and wrists). Such conditions may be caused or made worse by people's work; by home or leisure activities; or by a combination of these factors. Serious cases can result in permanent disablement if no action is taken, or action is not taken in time. Problems are usually caused by poor workplace or task design. Risks come from jobs involving:

- poor working positions
- high levels of force and grip
- highly repetitive work
- manual handling tasks including lifting, carrying, pushing and pulling
- too much bending, stretching or reaching
- poor working environment
- a combination of these things

Why employers should take action

The Management of Health and Safety at Work Regulations 1992, Manual Handling Operations Regulations 1992 and Health and Safety (Display Screen Equipment) Regulations 1992, require employers to assess the risks of musculoskeletal disorders and to take preventive action. Also, musculoskeletal problems cost money - from sickness absence, high staff turnover, retraining, loss of production etc. Compensation claims are increasing, and problems may affect employers' insurance premiums. Reducing health risks at work leads to reduced fatigue, improved staff motivation and increased productivity.

** Figures based on 1995 self-reported work-related illness survey*

High-risk industries and processes

Problems affect workers in a very wide range of industries. Examples of high-risk areas include:

- construction
- medical and health services
- repetitive assembly and inspection work
- farming, fishing & forestry
- metal and electrical processing
- transport and material moving and storing

Musculoskeletal problems can show themselves at the workplace in different ways, some more obvious than others. Look out for:

- employees with injuries to backs or limbs
- high sickness absence
- employees complaining of aches and pains
- low output
- poor product quality and high material waste
- frequent rest stops
- makeshift improvements to workstations and tools (eg seat padding)
- employees wearing bandages, splints, rub-ons, copper bracelets

What you can do to prevent musculoskeletal disorders

- Follow the steps in HSE's *Health risk management guide.*
- Refer to key HSE publications for more guidance
- **Guidance**
  A pain in your workplace: Ergonomic problems and solutions
  Manual handling - solutions you can handle
  VDU's: An easy guide to the Regulations
- **Video**
  What the papers weigh!
  Handling rubber

see order form centre pages

CASE STUDIES

How one company removed their problems with a handle

Operators in a manufacturing plant manoeuvred a drum of steel wire weighing 365 kg into a machine for winding springs. There were reports of back and shoulder pain and one serious back injury. For just £20 the company made a long handle to attach to the drum making it much easier to move. The operators were happier using the handle and there have been no injuries or reports of pain since.

Solving the problems caused by a screwdriver

A worker assembling 50 manifolds per hour using a manual screwdriver began to suffer discomfort in both hands. Diagnosed as having tenosynovitis in one hand and carpal tunnel syndrome in the other, she was off work for four months. To stop this happening again, the solution was simple - for £500, a rig was fitted to hold the manifolds and a torque-controlled air screwdriver was introduced. The risk of injury has been greatly reduced, there is less material wastage and product quality has improved.

NOISE AT WORK

The problem

Noise-induced hearing loss is one of the most common causes of ill health in industry. About 1.3 million workers are thought to be exposed to noise above levels which could damage their hearing. Around 170,000 people in Great Britain consider that they suffer hearing loss or other ear conditions caused by their work.* Civil liability claims represent about 74% of all occupational disease claims and about 31% of the value of all such awards.

The risks and ill-health effects

Exposure to loud noise can cause permanent hearing damage. The risk depends on the noise levels and how long people are exposed to them. Those suffering from poor hearing due to age or illness can also have their problems made worse by exposure to loud noise at work.

Workers with damaged hearing complain of being isolated, frustrated and misunderstood. Age is no protection - the young can be damaged as easily as the old. Once hearing has been damaged by noise, there is no cure. There is no effective treatment and hearing aids are only of limited use. People can also suffer from tinnitus, a constant ringing in the ears that can cause unending suffering. Other effects may include increased stress, reduced efficiency and disturbed sleep.

Why employers should take action

The Noise at Work Regulations 1989 require workers to be protected from loud noise. Your workplace may have a noise problem if people have to shout or have difficulty being heard by someone about 2 metres away.

This means that you must reduce your employees' noise exposure as far as is reasonably practicable. If having done this their daily personal noise exposure is 85 dB(A) or more, you must provide them with information and training on the risk to their hearing and the precautions they should take, and you must also provide them with suitable ear protectors if they request them. If it is 90 dB(A) or more you must provide them with suitable ear protectors, make sure the protectors are worn properly and maintained and mark the areas in which they should be worn.

The result of such actions will be fewer hearing problems for staff, reduced risk of compensation claims, improved morale and increased productivity.

** Figures based on 1995 self-reported work-related illness survey*

High-risk industries and processes

Workers affected come from all the major industrial sectors, for example:

- construction
- shipping and transport
- drinks and packaging
- engineering
- air transport
- metalworking
- offshore industries
- agriculture
- forestry
- textiles
- glass
- mining
- steel
- quarrying
- entertainment
- potteries
- rubber
- printing
- woodworking

The most common industrial tools and processes generating noise include:

- saws
- riveting machines
- fans
- fettling
- presses
- grinding
- engines
- welding
- drills
- dryers
- hammers
- weaving
- road breakers

What can you do to prevent noise-induced hearing loss

- Follow the steps in HSE's *Health risk management guide.*
- Refer to key HSE publications for more guidance
- **Regulations**
  The Noise at Work Regulations 1989
- **Guidance**
  Reducing Noise at Work - Guidance on the Noise at Work Regulations 1989. ISBN 0 7176 1511 1 Price £9.75
  Sound solutions - case studies on practical ways to reduce noise problems ISBN 0 7176 0791 7 Price £10.95
  Keep the noise down - advice for purchasers of noisy machinery INDG263
  Protect your hearing! INDG299 (Pocket card for employees)
  Ear protection - employers' duties explained INDG298 (leaflet for employers)
  Wear ear protection properly MISC 185 (poster)

see order form centre pages

CASE STUDIES

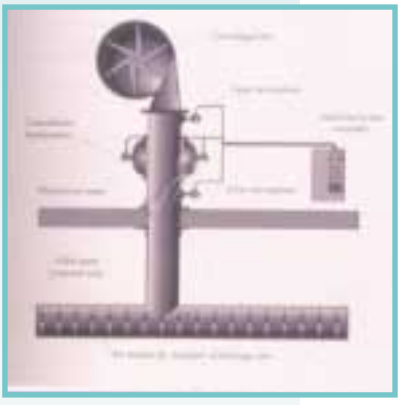
Maintaining equipment to reduce noise

A soft drinks manufacturer found that a pump used to transfer fruit juice concentrate from storage drums to the product mixing tanks produced noise levels of 103 (dB(A). On inspection, the pumps showed some mechanical deterioration.

A complete overhaul - including rewinding the drive motor, replacing the motor bearings, checking and cleaning the pump bearings, and repacking the pump glands - reduced the noise by 27 dB(A).

Introduction of active noise control

A six-bladed radial fan supplied air to move the cans along production lines in a drinks canning plant. The company decided to introduce an active noise-control solution.



The solution consisted of a digital signal-processing controller, which produces a digital model of the noise. A signal microphone fed information to the controller which then produced an inverse sound wave from a loudspeaker. This 180-degree out-of-phase wave use destructive interference to cancel the noise. A second microphone analysed the operation of the system and adapted it continuously to take account of system changes. Tonal noise was reduced by 22 dB without interrupting the work process.

How one man improved staff efficiency with a gun

A company moulding plastic components, using compressed air guns to clear powder deposits, measured noise levels of 105 dB(A) near to where employees were working. By replacing the air guns' nozzles, at £40 each, with ones reducing the turbulence within the tube, noise levels were reduced by up to 10 dB(A). The new tools were also stronger.

Generating improved profits by generating less noise

In the car industry, one company found that the noise generated during the machining of alternator end-castings was 104 dB(A). The solution was to apply, at a cost of £40, a simple damping treatment to reduce the amount of vibration. As a result, noise levels decreased by 16 dB(A). In addition, the quality of the cut improved and machining time was reduced.

RESPIRATORY SENSITISATION

The problem

Work-related (occupational) asthma is an extremely distressing and potentially life-threatening disease. It is estimated that 1,500 to 3,000 new cases occur each year as a result of breathing in substances called respiratory sensitisers. Estimates suggest that there are around 151,000 people suffering from a lower respiratory disease with asthmatic symptoms caused by their work.* It is further estimated that the illness costs the economy an estimated £68 million to £159 million each year.

The risks and ill-health effects

Respiratory sensitisers are substances which, when breathed in, can cause an irreversible allergic reaction in the respiratory system. Once this sensitisation reaction has taken place, further exposure to even the tiniest trace of the substance causes symptoms.

The symptoms are:

- asthma - attacks of coughing, wheezing and chest tightness;
- rhinitis and conjunctivitis - runny or stuffy nose and watery or prickly eyes.

Sensitisation does not normally take place right away. It generally happens after several months or even years of breathing in the sensitiser.

Once a person is sensitised, however, symptoms can occur either immediately they are exposed to the sensitiser or several hours later. If the symptoms are delayed, they are often most severe in the evenings or during the night, so workers may not realise that it is their work making them ill. Once a person is sensitised, continued exposure can result in permanent lung damage.

Why employers should take action

The Control of Substances Hazardous to Health Regulations 1999 require employers to prevent employees' exposure to respiratory sensitisers or where this is not reasonably practicable, to adequately control their exposure. By doing so you are preventing absence through sickness, loss of production and high staff turnover.

** Figures based on 1995 self-reported work-related illness survey*

RESPIRATORY

High-risk industries and processes

The majority of cases of occupational asthma occur as a result of exposure to just six agents. These occur in a variety of industries:

INDUSTRY	HAZARDOUS AGENT
• vehicle spraying and foam manufacturing	• isocyanates
• bakeries, grain handling at docks, milling, malting	• flour/grain/hay
• soldering, electronic assembly	• soldering flux
• research, education	• laboratory animals
• sawmilling, woodworking	• wood dusts
• curing of epoxy resins	• some glues/resins

What you can do to prevent occupational asthma

- Follow the steps in HSE's *Health risk management guide.*
- Refer to key HSE publications for more guidance
- **Regulations**
  The Control of Substances Hazardous to Health Regulations 1999
- **Guidance**
  Preventing asthma at work
  Respiratory protective equipment - a practical guide for users
- **Video**
  A matter of life and breath

see order form centre pages

CASE STUDIES

Reducing risks through automation

Workers in a dye store used to take large scoops of powdered dye to weighing scales by hand. When it became generally known that reactive dyes had the potential to cause asthma, the company changes to a fully automated process. A machine measures the powder and makes up the dye, improving conditions for the workers and the company.

Improving processes to avoid exposure

One of the workers in a mushroom store became allergic to the spores and developed occupational asthma.

The company changed the work of loading mushrooms into small containers by hand to a fully automated process and the worker was moved to a different part of the operation. No further cases have been reported.

RESPIRATORY

How clearing the air at work helped save a factory

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GOOD HEALTH IS GOOD BUSINESS PHASE 4

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WORK-RELATED DERMATITIS

The problem

Few people realise what a serious and debilitating disease work-related dermatitis can be until it happens to them. It is caused by exposure of the skin to certain substances at work. An estimated 66,000 people have a skin disease caused by their work, resulting in an estimated ½ million working days lost in a year.*

The risks and ill-health effects

Symptoms of the condition can be redness, itching, scaling and blistering of the skin. If it gets worse the skin can crack and bleed and the dermatitis can spread all over the body. It can be extremely painful - bad enough to keep people off work and serious enough to force them to change jobs. How quickly it develops really depends on the substance, its strength or potency, how long and how often it touches the skin. Some things might cause symptoms from almost the first day of contact with the skin. Some might take weeks, months or even years to cause work-related dermatitis. Sometimes it can be caused by a combination of factors - for instance the combination of wet hands and detergents.

But with a little care most cases can be prevented.

Why employers should take action

The Control of Substances Hazardous to Health Regulations 1999 require employers to prevent employees' exposure to substances likely to cause dermatitis or, where this is not reasonably practicable to adequately control their exposure. Also, dermatitis costs money - from sickness absence, loss of production, staff turnover, retraining, etc.

** Figures based on 1995 self-reported work-related illness survey*

High-risk industries and processes

Occupational dermatitis occurs in virtually all industries and business sectors. But the industries where it is most widespread are:

- Hairdressing/Beauty Care
- Cleaning
- Engineering
- Rubber
- Agriculture/Horticulture
- Food processing/Catering
- Construction
- Printing
- Offshore
- Health services

Substances as diverse as cement, shampoos, detergents, metal working fluids, lubricants and oils, certain chemicals and printing inks, and the sap from certain agricultural crops can cause work-related dermatitis.

What you can do to prevent dermatitis at work

- Follow the steps in HSE's *Health risk management guide*
- Refer to key HSE publications for more guidance
- **Regulations**

The Control of Substances Hazardous to Health Regulations 1999.

- **Guidance**

Guidance for employers and employees - occupational dermatitis leaflet

COSHH Essentials

- **Video**

Rash decisions

Safe use of printing chemicals

See order form centre pages

CASE STUDIES

Effective management of work-related dermatitis

A company manufacturing vehicle engines started to receive complaints about skin irritation from machine operators involved in grinding operations. This was thought to be due to the effects of the metalworking fluids used. The factory manager consulted a different metal working fluid supplier, who gave advice on the overall management of metalworking fluids including the correct mixing of water-based fluids and how to test the condition of the fluid. The company also installed an automatic fluid mixer and started to use a new high quality metalworking fluid. As a result the problem of skin irritation disappeared. The changes resulted in considerable financial benefits to the company: effective management of the fluid meant that much less of it was used, the machine down time was reduced because fewer fluid changes were needed and there was less waste to dispose of.

Gaining efficiency through health policy

CNC (computer-numerically controlled) lathe operators in a company manufacturing precision components from brass, stainless steel and aluminium for the aerospace industry complained of skin rashes.

The company sought advice from a new fluid supplier, and changed to using a high-quality fluid they recommended. Not only did this eliminate skin irritation, but the company was able to increase tool life by 40 per cent.

Controlling health risks through prevention

About 200 workers in a nursery were affected by an outbreak of dermatitis caused by the unique combination of celery sap and sunlight.

The next year, the company warned all workers of the dangers and advised them to wear long-sleeved shirts and rubber gloves, wash gloves and hands before meals, and not to sunbathe during breaks. They also created extra shade using a mobile packing gantry. Regular checks for early signs of dermatitis discovered one or two people with small rashes. These people transferred to other work. No severe cases were reported that season.

WORK-RELATED CANCER

The problem

Work-related cancers can often cause premature death. It has been estimated that 4% (range of estimates 2% to 8%) of all cancer deaths may have a work-related cause.

This amounts to about 6,000 deaths a year. Approximately half of these are caused by exposure to asbestos but the remainder are caused by other agents such as those described below:

Carcinogenic substances

The risks and ill-health effects

Certain chemicals which are used in the workplace have the potential to cause cancer and in most cases the law requires them to carry a warning label. The risk of one of these chemicals actually causing cancer will depend on a number of things -

- its potency.
- its concentration (either in the air or in the raw material)
- its form (some substances may be more likely to cause cancer in certain forms - for instance hardwood dust can cause cancer, but solid hardwood cannot)
- how it is used (e.g. extent of enclosure or ventilation)
- the level of exposure
- the duration of exposure

Why employers should take action

It is essential that any substances or work processes which may cause cancer are strictly controlled. The Control of Substances Hazardous to Health Regulations 1999 require employers either to prevent exposure or, where this is not reasonably practicable, to take specific control measures. HSE issues various publications which give advice on the control of carcinogens, the most important of which is the General COSHH Approved Code of Practice and the Carcinogens Approved Code of Practice.

- **Further Information**

COSHH: a brief guide to the regulations - IND(G) 136 (rev 1)

See order form centre pages

Ultraviolet radiation

The risks and ill-health effects

Excessive exposure of the skin to ultraviolet radiation can increase the risk of developing skin cancer. Most of us are exposed to ultraviolet rays from sunlight and normally this does not pose a problem, but people whose jobs keep them outdoors for a significant part of the working day, such as agricultural or construction workers, market gardeners, outdoor activity workers and some public service workers are most at risk.

Some people are more liable to skin cancers than others. People with fair sensitive skin which burns easily are most at risk. The greatest hazard occurs at the times of the day and periods of the year when the sun is most intense. Outdoor workers should therefore be advised not to shed clothing while working outdoors in the summer particularly in the three to four hours around the middle of the day. Other precautionary measures include wearing clothing to cover exposed areas (e.g. hats, long-sleeved shirts) and the use of sunscreens to protect parts of the body that are not easy to shade from the sun.

Why employers should take action

As part of their responsibilities to provide health and safety training for their employees, employers should include information about the risks from exposure to ultaviolet radiation. They should also ensure that information is available to workers so that they know what precautions to take in order to avoid the dangers of undue exposure of the skin to the sun. Employers should also reinforce the information by telling workers that a tan is not a healthy sign - it is a sign that the skin has already been damaged.

Further information

The *Keep your top on* leaflet INDG147 (rev1) 6/98

Single copies available free from HSE Books

see order form centre pages

Ionising radiations

The risks and ill-health effects

The risk of developing cancer is the most important effect of exposure to ionising radiations. Data from HSE's Central Index of Dose Information (CIDI) shows over 47,000 people are designated as classified persons under the Ionising Radiation Regulations. These individuals have a greater risk of receiving significant exposure. The National Radiological Protection Board has estimated that a further 200,000 individuals receive some occupational exposure.

Ionising radiations may take the form of electromagnetic rays (such as x-rays and gamma rays) or particles (such as alpha and beta particles). They occur naturally (eg as radon gas and its decay products) as well as being produced artificially. Risks arise from exposure to external radiation sources and from the intake of radioactive materials into the body, usually by inhalation.

There are a large number of sectors where people either work with ionising radiation directly or use instruments containing radioactive sources. These include: the nuclear industry; medical/dental work; non-destructive testing; and mining (particularly non-coal mining) and other workplaces in areas prone to radon gas.

Why employers should take action

The Ionising Radiation Regulations require employers to ensure exposure is kept as low as reasonably practicable and does not exceed specified dose limits. Employers are also required to take a wide range of measures, including the provision of information, instruction, training and supervision.

Further information

HSE Information Sheet *Ionising Radiation Protection Series No 1 - Industrial radiography*
HSE Information Sheet *Ionising Radiation Protection Series No 2 - Radiation doses - assessment and recording*
HSE Information Sheet *Ionising Radiation Protection Series No 3 - Portable nuclear moisture / density gauges in the construction industry*
HSE leaflet *Radon in the workplace (due to be updated in 2000)*

Single copies available free from HSE Books

see order form centre pages

Copies of ***CIDI statistical summaries*** are available from: Graeme Royal, HSE, 6NW Rose Court, 2 Southwark Bridge, London SE1 9HS

ASBESTOS

The problem: asbestos-related diseases

Breathing in air containing asbestos dust can cause asbestos-related diseases. These are mainly cancers of the chest and lungs. Asbestos-related diseases are currently killing an estimated 3,000 people a year in Great Britain. This number is expected to go on rising into the next century.

There is no cure for asbestos-related diseases.

There is usually a long delay between first exposure to asbestos and the onset of disease: this can vary between 15 and 60 years. The vast majority of people now dying were exposed to asbestos during the 1950s and 1960s, when the use of asbestos in Great Britain was widespread. This was before the current strict regulations on work with asbestos, including bans on the supply and use of the most dangerous types of asbestos, were introduced.

The risks

If it is intact, asbestos material does not pose a risk to health. It will pose a risk to health only if asbestos fibres are released into the air, for instance if the asbestos is damaged or worked on. That is why it is important to manage asbestos materials.

The more asbestos dust inhaled the greater the risk to health.

Why employers should take action

The Control of Asbestos at Work Regulations 1987 require employers to prevent, or where that is not reasonably practicable, reduce to as low a level as is reasonably practicable, their employees' exposure to asbestos. The cost of cleaning up a building contaminated by asbestos through careless work can be very high. Preventing employees' exposure will also reduce the likelihood of compensation claims.

ASBESTOS

High-risk industries and processes

A quarter of the people now dying from asbestos-related diseases worked in the building trade: they were carpenters, joiners, electricians, plumbers and others working on refurbishment, repairs or maintenance of buildings that contained asbestos.

Other workers, not normally associated with the building trade, may also disturb asbestos. For instance, gas fitters, computer cabling installers, fire alarm installers, window blind fitters and telecommunications engineers could also be at risk.

People may also be exposed to asbestos in some manufacturing processes that use raw asbestos. It is still used in some friction materials such as brake pads and clutch linings, so businesses involved with the repair and servicing of vehicles need to take care to ensure that their employees are not exposed to asbestos dust when they are carrying out work on such items.

What you can do to prevent asbestos-related diseases

- Follow the steps in HSE's *Health risk management guide*
- Refer to key HSE publications for more guidance
- **Regulations**

The Control of Asbestos at Work Regulations 1987

- **Guidance**

For workplace building owners, managers and employers:
Control of Asbestos at Work: Approved Code of Practice

- **Employee leaflets**

Working with asbestos in buildings

HSE pocket card: Asbestos alert for building maintenance, repair and refurbishment workers.

see order form centre pages

CASE STUDIES

Managing the risks from asbestos

A film production company decided to shoot a scene in a redundant power house in a large studio complex. This involved pulling power cables and steam lines between boiler pipes which had been lagged with asbestos. The production company was not aware that asbestos was present, and the studio had not advised them. The scene involved the use of a fan and a steam generator for special effects.

During the filming, around 100 people - including crew and actors - were exposed to asbestos released from the lagging.

HSE enforcers prosecuted the production company and the studio for failing to assess the risks and for failing to ensure the health of the workers. They were each fined £10,000.

Effective management of asbestos

A large council decided to carry out a survey of all its buildings to check for the presence of asbestos and to assess its condition. As a result of the survey the council now keeps a central record of the location of all asbestos materials. All repair and maintenance work is also co-ordinated centrally, and workers are informed if the material they are working on contains asbestos. As an additional safeguard, all asbestos materials are labelled. The council therefore has a system in place to prevent workers from unknowingly working on asbestos materials.

HAND-ARM VIBRATION

The problem

People who work regularly and frequently with powered hand-held tools or on other work processes which expose them to vibration through their hands are at risk of developing permanently disabling diseases of the hands and arms (Hand-arm vibration syndrome-HAVS). The most common and well known of these diseases is vibration white finger, but there are others which affect sensory nerves, muscles, joints and bones in the hands and arms.

Hand-arm vibration exposure can occur in a wide range of industries and occupations and can be caused by a wide range of tools, machines and processes.

Recent research suggests that 1.2 million people are exposed at levels where there is a risk of developing HAVS. An estimated 300,000 people are suffering from advanced symptoms of Vibration White Finger (VWF).*

Claims against employers for Vibration White Finger (VWF) represent around 8% of all employer's liability claims.

The risks and ill-health effects

Long term exposure to high levels of hand-arm vibration is known to cause a range of ill health effects including painful finger blanching, numbness and tingling and loss of manual dexterity. These effects may limit the sort of work people can do. For example working in cold or wet conditions could trigger a painful attack of finger blanching for those who have vibration white finger, which may rule out outdoor jobs. Even leisure activities such as fishing, going to football matches, swimming and cycling could be affected.

And once the damage is done it is unlikely to improve even if exposure to vibration stops.

Why employers should take action

The Management of Health and Safety at Work Regulations 1992 require employers to assess the risks from hand-arm vibration and to take preventive action. The Provision and Use of Work Equipment Regulations 1992 require employers to take account of vibration emissions when selecting equipment for employees

** Figures based on the Medical Research Council/Institute of Sound and Vibration Research report on Hand-arm Vibration (1999)*

to use, to make sure it is used properly, and to ensure it is maintained properly.

Generally, devising ways to make sure that employees are not working with high vibration equipment will often lead to more efficient ways of working giving improved quality and increased output. So tackling vibration makes good sense both for your employees and for your business.

High risk industries and processes

Workers affected come from a wide range of industries, principally:

- amenity horticulture
- construction
- foundries
- mines and quarries
- railways
- shiprepair
- civil engineering
- forestry
- heavy engineering
- public utilities
- shipbuilding

The most common industrial tools and processes generating vibration include:

- roadbreakers
- hand-held grinders
- needle guns
- riveting hammers
- pedestal grinders
- brush cutters
- chipping hammers
- orbital sanders
- nut runners
- rock drills
- chainsaws
- strimmers

What you can do to prevent hand-arm vibration syndrome

- Follow the steps in HSE's *Health Risk Management Guide*
- Refer to key HSE publications for more guidance
- **Guidance** ***Hand-arm vibration*** (HS(G)88)
  Vibration Solutions (HS(G)170)
- **Video** ***Hard to handle***
- **CD-ROM** ***Successful management of hand-arm vibration***

CASE STUDIES

Introduction of lower vibration tools

At one shipyard employees were using electrically powered angle grinders with 225mm discs to dress welds and fettle metal fabrications. These large and heavy tools were being used by the operator for an average of one to three hours per day exposing them to hazardous levels of hand-arm vibration. The company decided to review all the grinders on the market to see if lower vibration models were available. They were able to identify a new pneumatically powered model, featuring automatic correction for disc imbalance, which had half the vibration levels of the old tools. The employer replaced the old grinder with the new low vibration models. Further tests with this tool showed that using softer grade discs improved the metal removal rate by 40% compared with the old tools, significantly increasing efficiency. The new grinder is also lighter and less tiring to operate.

Using different types of machines to reduce vibration exposure

Employees at a ceramics factory used a pedestal grinder to remove blemishes from the ceramic ware which exposed them to hazardous levels of vibration. The employer decided to replace the pedestal grinders with specially designed bench top belt grinders and polishers which produced half as much vibration as the old pedestal grinders. They also required less skill to operate, doubled the output and were less noisy.

Maintenance and training programme to avoid deterioration of vibration performance of tool

A rivers authority was using low vibration chainsaws to clear river banks and watercourses. However, tests showed that lack of maintenance had lead to increased vibration levels from these tools. Isolation bushes had perished and become ineffective, and chains had become blunt and were cutting at one third the speed of a sharp bladed chainsaw leading to workers having to use them for much longer to complete a job. The company decided to develop a planned maintenance programme to ensure that chainsaw parts are replaced before they stop working. They also gave the operators training in correct maintenance and adjustment of their chainsaws.

INDUSTRIAL SOLVENTS

The problem

It is estimated that over seven million people in industry are exposed to industrial solvents. Of these, over two million are routinely exposed, mainly in the manufacturing sectors. There are literally hundreds of different types of solvents, many of which can cause ill health if exposure is not controlled. The health effects are varied but the basic steps necessary to reduce ill health are similar and often can be carried out at little cost. Reducing absenteeism due to ill health, reducing the risk of costly accidents and improving your employees' performance will improve the efficiency of your business.

The risks and ill - health effects

The most likely effects of solvents are irritation of the skin, eyes and respiratory tract. They may also have an effect on the central nervous system known as CNS depression sometimes called narcosis or anaesthesia.
Contact with liquid solvents can cause the skin to dry out, which may lead to the development of dermatitis on prolonged or repeated contact. Solvent vapours can irritate the airways and lungs. Symptoms of overexposure to solvents may include headaches, nausea, dizziness and impaired co-ordination. Very high exposures, in certain circumstances, may cause unconsciousness, and in some cases, even death.

Why employers should take action

The primary reason for taking action is to prevent ill health in the workforce. Simple precautions may also reduce the effect on the environment, reduce costs through better staff productivity and improved solvent use.
The Control of Substances Hazardous to Health Regulations 1999 require employers to prevent employees' exposure to harmful solvents or, where this is not reasonably practicable, to control their exposure adequately. The Environmental Protection Act 1990 also requires companies to implement integrated pollution control measures for prescribed processes by reducing emissions of solvents to the environment.

High risk industries and processes

Solvents are used in a wide range of industries, but the risk does depend on the process and how exposure is controlled. Some examples of industries and processes using solvents are:

- chemicals manufacture
- printing
- manufacture of coatings (paints etc.)
- pesticide manufacture
- edible oil extraction
- pharmaceuticals manufacture
- rubber manufacture
- use of decorative finishes
- dry cleaning
- degreasing

What you can do to prevent ill-health

- Follow the steps in HSE's *Health Risk Management Guide*
- Refer to key HSE publications for more guidance
- **Guidance**
  Health Risks Management: A Guide to working with Solvents - An employers' guide
  Working Safely with Solvents: A Guide to Safe Working Practices
  Control of Solvents in the Rubber Industry
  COSHH a brief guide to the regulations
  COSHH Essentials
- **Video**
  Safe use of Printing Chemicals: COSHH and Substitution

  The Environmental Technology Best Practice Programme also has a range of free publications which deal with the minimisation of solvent use and emissions. This helps to protect the environment and the health of employees and saves money as well (Contact the Environmental Helpline 0800 585 794)

CASE STUDIES

Dry cleaning

Very high levels of operator exposure to perchloroethylene and excessive solvent use were two problems at Initial Garment Services Ltd Bradford (formerly Allied Garment Services) a dry cleaning company. To address these issues the company had the dry cleaning machines completely refurbished, installed a new ventilation system (incorporating solvent recovery), and introduced punch card programming to the machines to automate the wash and dry cycle. Checks reveal that occupational exposure is now significantly below the exposure limit and the cycle has been reduced from 90 to 50 minutes. The £5k solvent recovery system has brought savings from reduced solvent usage of £30k over three years. The solvent cost per wash cycle has been reduced from £5.50 to £1.35. The company reported that they can now dry clean to a higher standard, quicker and with reduced solvent usage.

Degreasing

How an employee solved a problem

Flexonics Automotive Ltd (manufacturers of flexible couplings for catalytic converters) were concerned about workers' exposure to solvent vapour during degreasing with trichloroethylene. Evaporation of excess solvent retained in the recesses of the components (couplings) was not adequately controlled. An employee suggested that they fabricate a metal cover to place over the existing extraction cabinet, which enclosed the process.

This case study demonstrates the important role of the employee in contributing to workplace solutions.

Vapour de-greasing

A manufacturing company for the aerospace industry (Flight Refuelling, Dorset) using solvents for degreasing metals sought to reduce the cost of solvents, operator exposure and environmental emissions. They replaced their six open-topped vapour degreasing tanks with two totally enclosed and two open-topped systems (with lids) and doubled the freeboard height. In addition, draughts were reduced using screens and strip curtains.

Checks reveal that operator exposure and environmental emissions have now been reduced significantly. Capital expenditure has been paid-back in two years and subsequent savings made of £30k per annum.

Metal paint stripping

Exposure levels to dichloromethane at Ribble Technology, Preston a metal paint stripping company were 2 to 3 times the maximum exposure limit (MEL). In addition, removal of parts by hand resulted in both skin contact and routine spillages of quantities of solvent.

Component baskets and a second hand hoist were purchased for loading and unloading the parts, and a ventilation system was installed above the baths. Monitoring shows that skin contact has been significantly reduced and exposure via inhalation is now below the MEL. The time taken to unload the components has been reduced from 60 to 20 minutes and, solvent losses from spillages have been significantly reduced. The capital expenditure of £2,500 has been subsequently recovered from these reduced solvent losses.

GOOD HEALTH IS GOOD BUSINESS CAMPAIGN - What has HSE found so far?

These pages summarise what inspectors found in the first phases of the campaign, and suggests that there are some important lessons to be learned.

What have HSE inspectors been doing?

During the first phases of the campaign, inspectors undertook over 1800 special visits, looking in detail at problems associated with:

- noise
- musculoskeletal disorders
- respiratory sensitisers
- dermatitis
- carcinogens

Other health issues, hand arm vibration and industrial solvents were also targeted

What did HSE inspectors find?

Inspectors looked at how employers were complying with requirements to:

- assess and control risks
- provide information, instruction and training for their employees, and
- provide health surveillance when required

and also how occupational health risks generally were managed.

Most aspects of management (i.e. planning, control of risk, cooperation with employees) were considered satisfactory in roughly three quarters of premises visited. There were however two notable exceptions where far fewer companies were considered satisfactory:

- measurement of performance (i.e. are the control measures still effective?), and
- review and auditing (i.e. are the management arrangements still working properly?). This was especially weak.

In other words, having arrangements for positively checking that "things are still OK" needs to receive a lot more attention, rather than just assuming that they are.

Does this mean that in general everything is OK?

No, it doesn't. While some encouragement can be taken from the campaign so far, performance in managing health risks in a substantial minority of employers visited was found to be less than satisfactory, representing a wide range of problems still to be tackled and large numbers of employees still at risk.

Where do improvements need to be made?

Many examples were identified where action was needed. The remedy was usually obvious once the problem had been identified, and simple to put right. Here are a few instances:

Risk assessment -

- hazards incompletely assessed e.g. inadequate noise survey
- assessment too vague resulting in failure to address specific problems e.g. dust survey results not available, need for personal protective equipment not identified
- lack of management commitment and knowledge of basic legal requirements e.g. no action taken despite history of musculoskeletal disorders
- dermatitis assessment out of date
- failure to identify hazard i.e. that respiratory sensitisers were being used.

Control measures -

- employer slow to follow assessment recommendations
- hearing protection provided as the complete solution instead of looking first at engineering control of noise hazard
- inadequate control of manual handling processes e.g. mechanical aids not considered where they could be used, and poor work station design
- no monitoring carried out to show that exposure to respiratory sensitisers was properly controlled

Information, instruction and training -

- information given was too general
- no training in manual handling had been provided
- instructions indicated that wearing personal protective equipment was only advisable, when it was in fact legally required

Health surveillance -

- health surveillance for noise should in some cases have included audiometry
- over 40% of employers using respiratory sensitisers did not have adequate health surveillance arrangements
- over 60% of employers carrying out work where there was a dermatitis risk did not have adequate health surveillance arrangements.

It's usually not difficult to put things right

The fact that the majority of businesses are able to comply with most requirements sends a positive message to those performing less well - YOU CAN DO IT TOO!

Very often the answer lies in some common sense action at little cost, rather than lots of expensive hardware. See the case studies early in this book.

So, what should employers be doing?

Although every workplace is different, we can draw some general conclusions and make a few recommendations as follows:

- the key to reducing ill-health at work is through the effective and competent management of health risks
- many employers would in particular benefit greatly from paying more attention to checking that controls are working properly, and that they have effective management arrangements for reviewing their health (and safety) procedures
- employers should review health risks in the workplace on a regular basis, taking account of sickness absence rates
- health surveillance needs should in many instances be carefully reviewed
- employers should make sure that employees are informed of health risks and precautions which need to be taken.

Remember:

- there is much free information available from HSE, local authorities and other organisations. Make full use of this
- dealing with health risks is in most instances neither expensive nor complicated. All that is usually required is a little thought and commitment.

Make it happen in your workplace

WHERE TO GO FOR HELP

Health risk management

Health risk management, a guide produced by HSE especially for managers in small and medium-sized firms, is full of practical advice based on the experience of owners and managers. The guide should convince employers that managing work-related health risks need not be difficult; they can do it successfully, and the results will benefit both employees and their business as a whole. The guide costs £6.50 from HSE Books and good booksellers.

HSE also produces a comprehensive range of publications including guidance, leaflets and newsletters which are also available from HSE Books. There is an order form in the centre pages of this booklet.

HSE Books

PO Box 1999, Sudbury, Suffolk
CO10 2WA.
Tel: 01787 881165
Fax: 01787 313995
HSE publications can also be ordered on-line from
www.hsebooks.co.uk

Other health and safety enquiries

Ring HSE's Infoline 0541 545500 or write to HSE Information Centre, Broad Lane, Sheffield S3 7HQ

HSC Newsletter

Published six times a year by the Health and Safety Commission providing a single source of authoritative information to keep you up-to-date with UK and European health and safety issues. Available on subscription from HSE Books

HSE Videos

HSE has produced a special campaign video *Make health your business*, as well as other new videos on health in the workplace.

HSE Videos, Dept GH, PO Box 35,
Wetherby, Yorkshire LS23 7EX
Tel: 0845 741 9411.
Fax: 01937 541083

See order form centre pages.

Internet

HSE's home page on the World Wide Web is located at http://www.open.gov.uk/hse/hsehome.htm

HSE Offices

HSE covers factories, building and construction sites, farms, mines, quarries, fairgrounds, railways, chemical plant and other places where work activity is carried out. HSE Office addresses are on the following pages.

Local authority environmental health departments

Local authorities cover shops, some warehouses, most offices, leisure and consumer services, hotels, restaurants and places of worship. The address and phone number of your local environmental health department is in the telephone book or from the Citizens Advice Bureau.

Other sources of help

Health and safety advice can also be obtained from your trade association, employer association and appropriate occupational health specialists.

HSE OFFICES

South West
Inter City House
Mitchell Lane
Victoria Street
Bristol BS1 6AN
Telephone: 0117 988 6000
Fax: 0117 926 2998

South
Priestley House
Priestley Road
Basingstoke
Hants RG24 9NW
Telephone: 01256 404000
Fax: 01256 404100

South East
3 East Grinstead House
London Road
East Grinstead
West Sussex RH19 1RR
Telephone: 01342 334200
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Fax: (020) 7556 2200

East Anglia
39 Baddow Road
Chelmsford
Essex CM2 0HL
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Fax: 01245 706222

Northern Home Counties
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Luton
Beds LU1 1PP
Telephone: 01582 444200
Fax: 01582 444320

East Midlands
5th floor, Belgrave House
1 Greyfriars
Northampton NN1 2BS
Telephone: 01604 738300
Fax: 01604 738333

West Midlands
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35 Dale End
Birmingham B4 7NP
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Wales
Government Buildings, Phase 1
Ty Glas, Llanishen
Cardiff CF14 5SH
Telephone: (029) 2026 3000
Fax: (029) 2026 3120

Marches
The Marches House
Midway
Newcastle-under-Lyme
Staffs ST5 1DT
Telephone: 01782 602300
Fax: 01782 602400

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1st floor, The Pearson Building
55 Upper Parliament Street
Nottingham NG1 6AU
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Fax: 01159 712802

South Yorkshire and Humberside
Sovereign House
110 Queen Street
Sheffield S1 2ES
Telephone: 0114 291 2300
Fax: 0114 291 2379

West and North Yorkshire
8 St Paul's Street
Leeds LS1 2LE
Telephone: 0113 283 4200
Fax: 0113 283 4296

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Quay Street
Manchester M3 3JB
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Fax: 0161 952 8222

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Stanley Road
Bootle Merseyside L20 3PG
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Fax: 0151 479 2201

North West
Victoria House
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Preston PR1 1HH
Telephone: 01772 836200
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Arden House
Regent Centre
Gosforth
Newcastle-upon-Tyne NE3 3JN
Telephone: 0191 202 6200
Fax: 0191 202 6300

Scotland East
Belford House
59 Belford Road
Edinburgh EH4 3UE
Telephone: 0131 247 2000
Fax: 0131 247 2121

Scotland West
375 West George Street
Glasgow G2 4LW
Telephone: 0141 275 3000
Fax: 0141 275 3100

This booklet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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"All too often people are made ill by their work. It is a fundamental of business to take care of your people's health and safety so that they can take care of you. Well run businesses are invariably happy and healthy ones and profitable as well. HSE's Good Health is Good Business campaign to help you manage work-related risks to health is good for all of us and has my enthusiastic support."

SIR JOHN HARVEY-JONES MBE