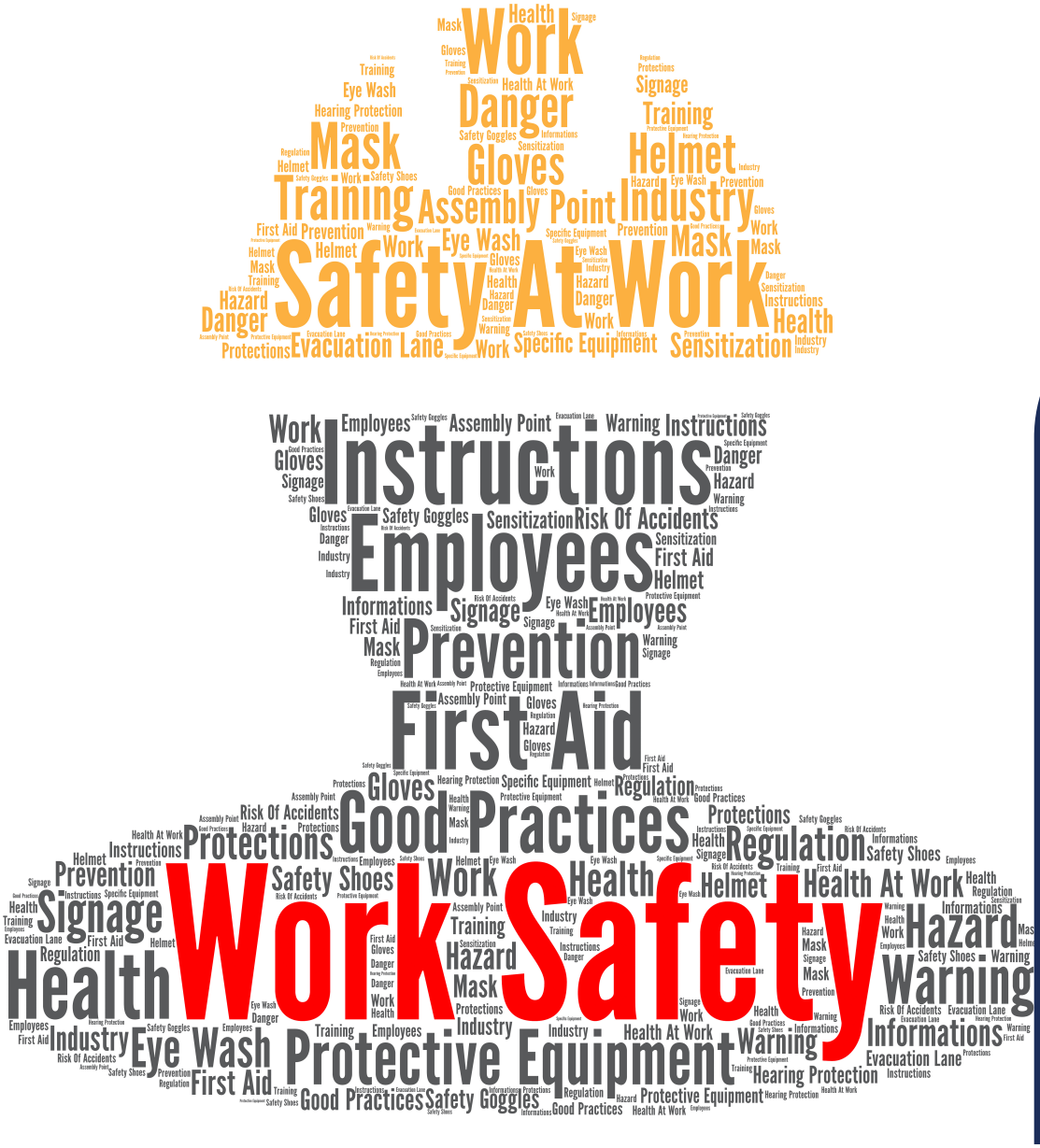

OCCUPATIONAL HEALTH & SAFETY

BOOKLET

Welcome to your Occupattional Health & Safety Booklet

To download this booklet onto your phone or computer, please use the QR code below.

Contents

Section 1

Musculoskeletal Disorders (MSDs)

Musculoskeletal Disorders (MSDs)

The main focus of our work is on health and safety issues related to pain and disorders caused by the work a person does, whether this occurs in neck shoulders and arms (Upper Limbs), back, or hips knees and ankles and feet (Lower Limbs). These pages also look into manual handling and the impact of using display screen equipment.

Key messages about MSDs are:

- **you can do things to prevent or minimise MSDs**
- **the prevention measures are cost effective**
- **you cannot prevent all MSDs, so early reporting of symptoms, proper treatment and suitable rehabilitation is essential.**

Risk factors causing MSDs can be found in virtually every workplace from commerce to agriculture, health services to construction. An estimated 11.6 million working days a year are lost to work-related MSDs.

Back pain

Most people have back pain at some time. Usually the pain is not caused by anything serious and it settles within a matter of days or weeks.

Medical evidence from the Royal College of General Practitioners and the Faculty of Occupational Medicine focuses on three key messages for sufferers to deal with back pain:

- **Stay active**
- **Try simple pain relief**
- **If you need it seek advice**

For some real life examples, go to the 'case studies' section of the HSE website to see what others have done to reduce the incidence of back pain at work and how organisations have worked to rehabilitate sufferers and get them back at work.

For information to help employers, managers and employees prevent and manage the effects of back pain in the workplace visit the back pain section.

Upper limb disorders (ULDs)

The term Upper Limb Disorders (ULDs) includes the condition known as "repetitive strain injury" (RSI), these two terms are not interchangeable because RSI does not cover all upper limb disorders. ULD is used as an umbrella term for a range of disorders of the hand, wrist, arm, shoulder and neck. It covers those conditions, with specific medical diagnoses (e.g. frozen shoulder, carpal tunnel syndrome), and other conditions (often called RSI) where there is pain without specific symptoms. Symptoms may include pain, swelling and difficulty moving.

ULD cases caused by work can also mean production losses and compensation claims for employers.

For information to help employers, managers and employees prevent and manage the effects of ULDs in the workplace visit the ULD section.

Musculoskeletal Disorders (MSDs)

Lower Limb Disorders (LLDs)

Lower Limb Disorder (LLD) is used as an umbrella term for a range of disorders of the hips, legs, knees, ankles and feet. It covers those conditions with specific medical diagnoses (e.g. Osteoarthritis of the knee and hip), and other conditions where there is pain without specific symptoms. Symptoms may include pain, swelling and difficulty moving.

About 20% of all work-related musculoskeletal disorders affect the lower limbs. In 2009/10 an estimated 94,000 people in Great Britain who had worked in the last 12 months suffered from an LLD caused or made worse by their work. It is estimated that these workers took an average of 25 days off work.

One piece of research suggested that 50% of cases of surgically treated knee Osteoarthritis and 30% of surgically treated hip Osteoarthritis were related to occupational factors.

For information to help employers, managers and employees prevent and manage the effects of LLDs in the workplace visit the LLD section.

Display Screen Equipment (DSE)
DSE includes all the potential issues that may result from using Display Screen Equipment, which used to be referred to as VDUs (Visual Display Units) and includes use of computer equipment in both the workplace and at home if you are a home-worker. ULDs, headaches and visual problems can all be associated with working at a poorly designed workstations.

For information to help employers, managers and employees prevent and manage the effects of risks of working with DSE visit the DSE section.

Manual handling

Manual handling covers a wide variety of tasks including lifting, lowering, pushing, pulling and carrying. Injuries can occur almost anywhere, when people are at work or at home, and for many reasons like heavy loads, awkward postures. In addition, previous or existing injury can increase the risk.

If any of these tasks are not carried out safely then there is a risk of injury. More than a third of all reported workplace injuries which result in someone being off work for more than 3 days are caused by manual handling.

Early reporting of symptoms, proper treatment and suitable return to work plans can help most people recover from their injuries and return to employment. However a few individuals may need to take longer periods off work and possibly even leave work entirely. The injured person may find that their lifestyle, leisure activities, ability to sleep and job prospects are affected.

Work related manual handling injuries can have serious implications for the employer too they may have to bear substantial costs, for example for retraining, wages, overtime and civil liability.

For information to help employers, managers and employees prevent and manage the effects of risks of manual handling in the workplace visit the Manual Handling section.

For more information, please visit the HSE website.

https://www.hse.gov.uk/guidance/topics.htm

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Section 2

Respiratory Problems

Occupational Cancer

Currently, occupational cancer accounts for around 8000 deaths and a further 14,000 cancer registrations annually. A study looking at the burden of occupational cancer in Great Britain provides an updated estimate of the current burden of occupational cancer due to exposure to cancer causing agents that occurred in the past and explores the future cancer burden due to occupation. This work has helped HSE to develop priorities for future activity and these priority agents/occupations are:

- Asbestos
- Shift work
- Respirable crystalline silica
- Welding
- Painters
- Diesel Engine Exhaust Emissions
- Solar radiation
- Polycyclic Aromatic Hydrocarbons (PAHs, coal tars and pitches)
- Radon

Asbestos

Although the import, supply and use of all forms of asbestos has been banned for a long time, a high number of tradespeople are still at risk from exposure to asbestos. Any building built before the year 2000, both residential and industrial, may still contain asbestos-containing materials that could be disturbed by tradespeople carrying out work.

Exposure to asbestos is associated with the following diseases: mesothelioma, lung, larynx and stomach cancers, as well as asbestosis and pleural thickening, resulting in around 5000 deaths each year. Many of these deaths are due to past exposure to asbestos; however, asbestos is still a risk today.

The following initiatives have been developed to raise awareness of the dangers of asbestos amongst tradespeople:

- HSE's Beware Asbestos HSE's Beware Asbestos campaign launched in October 2014. The campaign aims to raise awareness and help tradespeople protect themselves from the dangers of asbestos. The campaign includes some useful reference cards. and a FREE Beware Asbestos Web app that can help tradespeople to identify if asbestos is likely to be in their workplace. It gives them practical advice on how to protect themselves from the dangers, and advises them on when and how to get experts involved.

- For further information on occupational diseases, and other initiatives please register on the Occupational Disease community site.

  Further information on exposure to asbestos in the workplace is available on HSE's asbestos web pages.

Shift work

Over the last 25 years, there has been a gradual increase in the number of people who undertake shift work in the UK, with around 5 – 20% of the working population now engaged in shift work that involves night work. This equates to 3-6 million workers. There is an emerging body of evidence that shift work, and night work in particular, is linked with the development of breast cancer but further work to confirm this causal link is still being undertaken.

Respiratory Disease

breast cancer in women who undertake shift work.
Initiatives that have been undertaken to raise awareness of the dangers of shift work include:

- Guidance developed by HSE for employers to help them manage shift work
- HSE funded research to study the relationship between shift work and chronic disease.

By registering, information on these and other initiatives are available on the Occupational Disease community site.

Additional information on managing shift work patterns is available on HSE's human factors.

Silica - Respirable Crystalline Silica (RCS)

Silica is a natural substance found in most rocks, sand and clay and in products such as bricks and concrete. In the workplace these materials create dust when they are cut, sanded down etc. Some of this dust may be fine enough to reach deep inside the lung, this is known as respirable crystalline silica (RCS) and can cause harm to health. Significant exposure to RCS can cause silicosis and lung cancer.

An estimate from the cancer burden study of the number of deaths from lung cancer associated with exposure to RCS shows there are around 600 deaths per year with 450 of these occurring from exposures in the construction sector.

Initiatives that have been undertaken to raise awareness of the dangers of working with RCS include:

- Safety and Health Awareness Days - free events to provide practical advice for employers.
- Training tools for employees.
- Educational tools such as vocational learning packages
- Surveys to obtain levels of awareness and knowledge of the use of on-tool extraction methods.
- Leaflets to raise awareness of the dangers of dust

By registering, Information on these and other initiatives are available on the Occupational Disease community site.

Welding

Welders are spread across many manufacturing and fabrication industries and present in both large and small businesses. The cancer burden study data shows that there are approximately 152 deaths per year from lung cancer and we estimate numbers of workers exposed to welding fume is more than 75,000.

Welding fume is variable in its composition. Depending on the type of welding being performed, the resulting fume is a complex mixture of gases and salts, including metals such as chromium and nickel and other compounds. Some of the constituents of the fume have Workplace Exposure Limits (legal limits that have been set on the amount of a particular substance that can be present in workplace air).

A partnership group composed of trade associations, professional organisations, suppliers, Association of Welding Distributors, Unite, AWFTE and the Welding Institute was set up to design interventions and these include:

- Safety and Health Awareness Days - free events to provide practical advice for welders
- A vocational learning package for trainee welders and those wanting to re-fresh their skills.
- An independent website for the industry to raise awareness of the health effects from exposures to welding fume and suitable control methods.

By registering, more information on welding interventions is available on the Occupational Diseases Community site.

Further information on exposure to welding fume on the workplace is available on HSE's welding

Painters

Painters are exposed to a wide range of substances including solvents, additives and pigments as well as materials containing asbestos and silica through their work in and on buildings. There are potentially large numbers of workers exposed, many in small businesses including those involved in vehicle spray painting and paint manufacture. Data from the cancer burden study shows that the number of deaths amongst painters from lung and bladder cancer is around 334 each year.

There is insufficient information available to identify which particular agents cause the reported cancers. Painters are exposed to a wide range of substances including solvents, additives and pigments as well as materials containing asbestos and silica through their work in and on buildings. Paint technology has changed over the last 20 years with a move to water based paints, micro-encapsulation of pigments and use of new thinners. Also, restrictions have also been introduced on putting hazardous materials on the market relating to dyes and pigments via the Marketing and Use Directive and more recently REACH regulation.

Initiatives providing advice and information on health issues for painters include:

- Raising awareness at the Painters and Decorators show.
- Articles in trade magazines.
- Research on the exposure of painters to hazardous substances and changes in application technology within the construction industry.

Further information is available by registering on the Occupational Diseases Community site.

Further information on health risks for painters is available on HSE's construction.

Diesel Engine Exhaust Emissions (DEEEs)

DEEEs are a complex mixture of particulates, gases and vapours, which occur when diesel -fuelled engines operate. In June 2012 the International Agency for Research in Cancer (IARC) classified DEEEs as carcinogenic to humans. Information based on the Cancer burden study shows the number of estimated deaths as 625 and it is estimated that more than 10,000 workers were exposed with environmental exposure contributing to the overall exposure burden. No Workplace Exposure Limit (WEL - legal limits that have been set on the amounts of a particular substance that can be present in workplace air) has been set for DEEEs as a whole as there are insufficient data to establish a clear, reliable threshold for all potential health effects). None of the constituents are considered suitable as a marker for DEEE exposure, although some do have specific WELs. Available evidence suggests that polycyclic aromatic hydrocarbons (PAHs) may be the causal link.

Respiratory Disease

The major source of workplace exposure to DEEEs is from emissions from heavy vehicles that use diesel fuel. Emissions are also generated from stationary power sources, which may be used regularly in tunnelling, mining or on construction sites.

Interventions on DEEEs in the workplace include:

- Guidance for employers and employees on the Control of Diesel Engine Exhaust Emissions in the Workplace
- Research that will provide current exposure information on DEEEs within the British construction industry.

Further information on DEEE interventions is available by registering on the Occupational Diseases Community site.

Solar radiation

Preventing sun exposure is primarily a public health issue with other organisations actively delivering messages. For example, cancer-based charities run campaigns on sun protection issues aimed at the general population that create a broad general awareness.

Where sun exposure occurs in an occupational setting there is an association with the development of non-melanoma skin cancer (NMSC). Available information from the cancer burden study estimates that there are very low numbers of deaths (around 12). In society high numbers of people develop NMSC, however this cancer is more amenable to treatment.

Intervention activities include:

- Cancer Research UK's Sun Smart campaign providing information on protection and risk factors.
- The National Institute for Clinical Excellence resource for the NHS and local authorities on the design and implementation of public health information on preventing skin cancer.

By registering, further information on skin cancer interventions is available on the Occupational Diseases Community site.

HSE guidance and information on skin cancer is available on our skin disease

Polycyclic Aromatic Hydrocarbons (PAH, Coal tars and pitches)

PAHs are a group of chemicals that are found in every industry, especially where substances are burned. Many PAHs are known carcinogens and are ubiquitous in the environment, occurring naturally in some hydrocarbon mixtures deriving from minerals, such as coal or petroleum. They are also generated in processes involving the combustion of any organic matter, including fuels. Coal-tar pitch volatiles, which contain PAHs, are produced during coking, tar distillation, aluminium smelting and downstream uses of tar and pitch.

Exposure to PAHs is associated with non-melanoma skin cancer (NMSC). Available information from the cancer burden study shows very low numbers of cancer deaths (11) and approximately 545 cancer registrations per year.

A research study in 2006 in Great Britain showed that there were no significant exposures to PAHs other than at sites undertaking timer impregnation. A further study to evaluate historical and current exposures to hazardous substances and their controls in the British construction industry is underway to update the available evidence. This evaluation covers many substances one of which is coal tars.

Further information is available by registering on the Occupational Diseases Community site.

Radon

Exposure to radon relates to geographical location rather than to a particular occupation or industry. It is seen as a public health issue for areas where radon is found and may seep into peoples' homes, but nevertheless, it remains an important consideration for employers who businesses are in radon-affected areas.

Radon exposure is associated with lung cancer and the cancer burden study estimates that the number of cancer deaths due to radon exposure in the workplace as 184 per year.
There is a significant public health focus to the information provided on reducing radon exposures, however, initiatives to support employers include:

- **Advice during HSE's general inspections of businesses**
- **Specific guidance for employers on radon in the workplace**
- **Working with other government departments on UK Radon Action Plan for the revised EU Directive on Basic Safety Standards for Radiation Protection.**

By registering, information on these and other initiatives on radon is available on the Occupational Disease Community site.

Specific guidance for employers on reducing radon exposure in the workplace is available on the radiation.

Respiratory Disease

For more information, please visit the HSE website.

https://www.hse.gov.uk/guidance/topics.htm

To download this booklet on your phone or computer, please scan the QR code below.

Section 3

Skin Disorders

Skin Disease

Work-related skin problems are very common. They can happen in most workplaces although they happen more in certain high-risk jobs.

- **Catering**
- **Hairdressing**
- **Health services**
- **Dentistry**
- **Printing**
- **Motor vehicle repair**
- **Construction**

They can be very costly, not just through the suffering individuals experience (which can lead to ending their careers), but also because they can be a burden for employers who are left with sickness absence, recruitment, training and compensation expenses.

What are work-related skin problems?

Work-related skin problems are caused or made worse by exposure to/coming into contact with substances such as chemicals, and also through having wet hands for long periods, while at work. Dermatitis (also known as eczema) is by far the most common,

Dermatitis

What is dermatitis?

Dermatitis is a skin condition caused by contact with something that irritates the skin or causes an allergic reaction. It usually occurs where the irritant touches the skin, but not always.

What does it look like?

If you look at pictures of skin that has dermatitis, you could see one or all of these signs:

- **Redness**
- **Scaling/flaking**
- **Blistering**
- **Weeping**
- **Cracking**
- **Swelling**

What does it feel like?

Someone who has dermatitis may experience symptoms of itching and pain. The signs and symptoms of this condition can be so bad that the sufferer is unable to carry on at work. We have provided some case studies to give you the chance to see and hear real-life examples of dermatitis and how they were managed.

What causes irritant contact dermatitis?

It can occur quickly after contact with a strong irritant, or over a longer period from repeated contact with weaker irritants. Irritants can be chemical, biological, mechanical or physical. Repeated and prolonged contact with water (eg more than 20 hand washes or having wet hands for more than 2 hours per shift) can also cause irritant dermatitis.

Skin Disease

What causes allergic contact dermatitis?

This can occur when the sufferer develops an allergy to a substance. Once someone is 'sensitised', it is likely to be permanent and any skin contact with that substance will cause allergic contact dermatitis. Often skin sensitizers are also irritants.

These are some of the more common causes of irritant and allergic contact dermatitis:

Irritant contact dermatitis

- **Wet work**
- **Soaps, shampoos and detergents**
- **Solvents**
- **Some food (e.g. onions)**
- **Oils and greases**
- **Dusts**
- **Acids and alkalis**
- **Wet cement**

Allergic contact dermatitis

- **Some hair dyes**
- **UV cured printing inks**
- **Adhesives**
- **Nickel**
- **Some plants (e.g. chrysanthemums)**
- **Colophony**
- **Certain wood dusts**

Urticaria

What is Urticaria?

Urticaria is a skin condition caused by contact with something that irritates the skin or causes an allergic reaction. Contact urticaria is different from dermatitis. In particular, it usually occurs quickly following skin contact and disappears again within hours. Common causes of urticaria are:

- **latex protein in single-use latex gloves;**
- **some foods (e.g. potatoes, fish, meat);**
- **cold or heat.**

What does it look like?

This picture shows skin which has contact urticaria. You could typically see a wheal (swelling)and flare (red mark) reaction.

What does it feel like?

Someone who has urticaria may suffer itching, tingling or burning sensations at the site of the rash.

Skin Cancer

What is skin cancer?

Skin cancer is one of the most common types of cancer. While most skin cancer is not to do with work, there are well-recognised causes for those that are linked with occupation. The most common causes of work-related skin cancers are:

- ultraviolet light (mainly from natural sunlight, not exclusively to do with work, but is significant for those who work
- outdoors);
- Ultraviolet light from sunbeds (where there may be a risk for sunbed operators and their employees). Please refer to our guidance on sunbeds for further details.
- some chemicals (such as polycyclic aromatic hydrocarbons [PAHs] from coal tar, pitch and unrefined mineral oils);
- Ionising radiation (e.g. from radioactive substances and X-rays).

Some substances can get in through the skin and cause cancers in other parts of the body.

What does it look like?

There is a range of signs linked with skin cancer e.g. a scaly patch of hard skin, a red lump or spot, an ulcer, a new mole, or a patch of skin which bleeds, oozes or has a crust

Outdoor workers and sun exposure

What is the problem?

Too much sunlight is harmful to your skin. A tan is a sign that the skin has been damaged. The damage is caused by ultraviolet (UV) rays in sunlight.

Who is at risk?

If work keeps you outdoors for a long time your skin could be exposed to more sun than is healthy for you. Outdoor workers that could be at risk include farm or construction workers, market gardeners, outdoor activity workers and some public service workers. If you have naturally brown or black skin, you are less at risk of skin cancer, although cases do occur. Therefore, when the sunlight is intense, it would be sensible if you also followed the guidance below to protect yourself. You should take particular care if you have:

- fair or freckled skin that doesn't tan, or goes red or burns before it tans;
- red or fair hair and light coloured eyes;
- a large number of moles.

Skin Disease

What are the harmful effects?

In the short term, even mild reddening of the skin from sun exposure is a sign of damage. Sunburn can blister the skin and make it peel.

Longer term problems can arise. Too much sun speeds up ageing of the skin, making it leathery, mottled and wrinkled. The most serious effect is an increased chance of developing skin cancer.

What can you do to protect yourself?

- **Keep your top on.**
- **Wear a hat with a brim or a flap that covers the ears and the back of the neck.**
- **Stay in the shade whenever possible, during your breaks and especially at lunch time.**
- **Use a high factor sunscreen of at least SPF15 on any exposed skin.**
- **Drink plenty of water to avoid dehydration.**
- **Check your skin regularly for any unusual moles or spots. See a doctor promptly if you find anything that is changing in**
- **shape, size or colour, itching or bleeding.**

Where can you get further information?

The HSE and Caner Research UK have some free leaflets that can be downloaded direct from their website.

What should I do about it?

The good news is that although these problems are common they are preventable. There are simple, cost-effective steps employers and workers can take to avoid skin problems at work, and to manage them if they do happen, using the Avoid, Protect and Check.

For more information, please visit the HSE website.

https://www.hse.gov.uk/guidance/topics.htm

To download this booklet on your phone or computer, please scan the QR code below.

Section 4

Noise at Work

Noise at Work

Contents

Introduction

The information on this page is mainly aimed at workers.

- Noise is part of everyday life, but loud noise can permanently damage your hearing.
- Young or old, once you lose your hearing you can never get it back.
- New regulations have been introduced to better protect workers from noise at work from April 2006.

Am I at risk?

You are at risk if you can answer 'yes' to any of these questions about the noise where you work:

- Is the noise intrusive - like a busy street, a vacuum cleaner or a crowded restaurant - for most of the working day?
- Do you have to raise your voice to have a normal conversation when about 2 m apart for at least part of the day?
- Do you use noisy powered tools or machinery for over half an hour a day?
- Do you work in a noisy industry, e.g. construction, demolition or road repair; woodworking; plastics processing;
- engineering; textile manufacture; general fabrication; forging, pressing or stamping; paper or board making; canning or
- bottling; foundries?
- Are there noises because of impacts (e.g. hammering, drop forging, pneumatic impact tools etc), explosive sources such as Cartridge - operated tools or detonators, or guns?
- Do you have muffled hearing at the end of the day, even if it is better by the next morning?

Symptoms and early signs of hearing loss

- Conversation becomes difficult or impossible
- Your family complains about the television being too loud
- You have trouble using the telephone
- You find it difficult to catch sounds like 't', 'd' and 's', so you confuse similar words
- Permanent tinnitus (ringing, whistling, buzzing or humming in the ears) can also be caused. Generally hearing loss is gradual. By the time you notice it, it is probably too late. We want to prevent hearing loss before it happens. You can also suffer instant damage from very loud or explosive noises.

Noise at Work

People's own stories

Dye house

A dyer who worked in a dye house for 15 years had a hearing check and was found to have 50% hearing loss at the age of 37. He now has problems using the phone, and needs an amplifier. Traffic is hard to hear unless he is right next to it, so crossing a road becomes stressful. When driving he often stays in 3rd gear too long as he can't hear the engine revving. Hearing loss could have been prevented with hearing protection.

Textile

A woman working in the textiles industry, only realised something needed to be done about her hearing loss when at the age of 40 she could not hear the phone ringing any more. Such hearing loss could have been prevented in the short-term with hearing protection. In the longer term, other ways of reducing exposure included quieter machines, maintenance, and changing job patterns.

Orchestra

A trombone player suffered dulling of his hearing after 20 years of playing. These problems may have been avoided if the orchestras he played in had tried different layouts or used risers that allowed him to play over the heads of those in front - rather than use them as human sound absorbers! He could also have tried to get used to wearing flat response earplugs so that he could still hear all frequencies.

DJ

A 24-year-old DJ found that, after working in a club where the sound system was particularly loud, he went home with a ringing sensation and it took several days for his ears to recover. The ringing in one ear has never completely stopped and he has become sensitive to loud music. He is now careful to wear suitable earplugs when DJ-ing.

Tasks and industries

Jobs and industries most likely to involve noise include:

- **Construction**
- **Demolition or road repair**
- **Woodworking**
- **Plastics processing**
- **Engineering**
- **Textile manufacture**
- **General fabrication**
- **Forging, pressing or stamping**
- **Paper or board making**
- **Canning or bottling**
- **Foundries**

Tools

Tools and equipment that can cause hearing loss include:

- **Hammering**
- **Drop forging**
- **Pneumatic impact tools etc**
- **Drills**
- **Chainsaws**
- **Explosive sources such as cartridge-operated tools or detonators, or guns. Many of these hand-held tools also transmit vibration into your hands and arms.**

How do I protect myself?

Co-operate.

Help your employer to do what is needed to protect your hearing. Make sure you use properly any noise control devices (e.g. noise enclosures), and follow any working methods that are put in place. Also attend hearing checks. This means you need to take some responsibility for your hearing.

Wear any hearing protection you are given.

Wear it properly (you should be trained how to do this), and make sure you wear it all the time when you are doing noisy work, and when you are in hearing protection areas. Taking it off even for a short while means that your hearing could still be damaged. Remember that there is no cure for deafness.

Look after your hearing protection.

Your employer should tell you how to look after it and where you can get it from. Make sure you understand what you need to do.

Report any problems

With your hearing protection or noise control devices straight away. Let your employer or safety representative know. If you have any ear trouble, let your employer know.
Where can I find out more?

Where can I find out more?

For more information on noise:

HSE's free pocket card Noise: Don't lose your hearing INDG363 (Contains notes on good practice which you may find helpful).

Download HSE's free leaflet Noise at work: A brief guide to controlling the risks INDG362 (rev1) (This leaflet is for employers on good practice and considering what they need to do).

- **You can also order a copy of these publications through HSE Books**

Noise at Work

Who can help?

Your employer has a duty to protect you and should be working on measures to reduce the risk. The law says that your employer has to find out what levels of noise you are exposed to and assess the risk to your hearing. See Advice for employers

Safety Representative/Employee representative. Trade-union-appointed safety reps or other employee representatives can be very useful in communicating problems, inspecting documents and consulting employers over measures to meet these regulations.

Your company doctor or your GP. This may be an occupational health professional where you have a company occupational health scheme or your general practitioner through the NHS.

For more information, please visit the HSE website.

https://www.hse.gov.uk/guidance/topics.htm

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Section 5

Vibration

(HAV) Vibration

Contents

Introduction

The information on this page is aimed mainly at workers

- You could be risking damage to nerves, blood vessels and joints of the hand, wrist and arm if you work regularly with handheld or hand-guided power tools for more than a few hours each day.
- Hand Arm Vibration Syndrome (HAVS) caused by exposure to vibration at work is preventable, but once the damage is done it is permanent.
- The Control of Vibration at Work Regulations 2005 were introduced to better protect workers from vibration at work and came into force in July 2005.

Am I at risk?

You are at risk if you regularly use hand-held or hand guided power tools and machines such as:

- Concrete breakers, concrete pokers;
- Sanders, grinders, disc cutters;
- Hammer drills;
- Chipping hammers;
- Chainsaws, brush cutters, hedge trimmers,
- Powered mowers;
- Scabblers or needle guns.

You are also at risk if you hold workpieces, which vibrate while being processed by powered machinery such as pedestal grinders.

You are particularly at risk if you regularly operate:

- Hammer action tools for more than about 15 minutes per day; or
- Some rotary and other action tools for more than about one hour per day.
  As you are likely to be above the exposure action value set out in the regulations.

(HAV) Vibration

What are the early signs and symptoms to look out for?

- Tingling and numbness in the fingers (which can cause sleep disturbance).
- Not being able to feel things with your fingers.
- Loss of strength in your hands (you may be less able to pick up or hold heavy objects).
- In the cold and wet, the tips of your fingers going white then red and being painful on recovery (vibration white finger). if you continue to use high-vibration tools these symptoms will probably get worse, for example:
- The numbness in your hands could become permanent and you won't be able to feel things at all;
- You will have difficulty picking up small objects such as screws or nails;
- The vibration white finger could happen more frequently and affect more of your fingers

People's own stories

Mechanical repair

A former mechanic technician hopes that by sharing his experiences with others, this may help save them some of the pain and financial worries that he is experiencing. He used and repaired a wide range of hand-held power tools, including chainsaws, but was signed off work in his 50s with vibration white finger:

'HAVS has affected my day-to-day living. I have a loss of manual dexterity and find it very difficult to use my fingers, in particular my thumbs, coupled with loss of feeling and sensations in various sections of my hands. Gripping with my thumbs is very difficult and painful, for example when using a brush. I dread the cold winter months and even during at rest periods I experience coldness and painfulness. I can no longer do some of the hobbies I used to enjoy, like swimming and angling.'

Heavy fabrication

A former technician (56) who worked with pneumatic tools describes his experiences.
"I suffer from very cold hands, they're worse in winter than in summer but they're still cold at this present day even though it's a warm day. When I used the tools, sometimes there's a frost on the tools, the pneumatic tools, when you've used them and that accentuates the feeling and they're dead very dead, numb all the while. I have difficulties picking up things, small things, pushing buttons. I drop things more and don't know the amount of pressure I'm putting on finger and thumb"

Shipbuilding

Another worker (35) describes the effects HAVS has had on his life and leisure.
"I play darts, can't do that any more, I can't do freshwater fishing, can't feel the lines, fine lines between the fingers, can't feel them at all. Can't pick up small screws, DIY, quite a few things I can't do a lot of now. I can't turn over the pages in a paper, you have to wet your fingers all the time because you can't feel the paper between the fingers"

Tasks and industries

Which jobs and industries are most likely to involve hand-arm vibration?

Jobs requiring regular and frequent use of vibrating tools and equipment and handling of vibrating materials are found in a wide range of industries, for example:

- Building and maintenance of roads and railways;
- Construction;
- Estate management (eg maintenance of grounds, parks, water courses, road and rail side verges);
- Forestry;
- Foundries;
- Heavy engineering;
- Manufacturing concrete products;
- Mines and quarries;
- Motor vehicle manufacture and repair;
- Public utilities (eg water, gas, electricity, telecommunications);
- Shipbuilding and repair.

Tools

What kinds of tools and equipment can cause ill health from vibration?

There are hundreds of different types of hand-held power tools and equipment, which can cause ill health from vibration. Some of the more common ones are:

- Chainsaws;
- Concrete breakers/road breakers;
- Cut-off saws (for stone etc);
- Hammer drills;
- Hand-held grinders;
- Impact wrenches;
- Jigsaws;
- Needle scalers;
- Pedestal grinders;
- Polishers;
- Power hammers and chisels;
- Powered lawn mowers;
- Powered sanders;
- Scabblers;
- Strimmer's / brush cutters.

How do I protect myself?

It is your employer's responsibility to protect you against HAVS and carpal tunnel syndrome, but you should help by asking your employer if your job could be done in a different way without using vibrating tools and machines. If this cannot happen:

- Ask to use suitable low-vibration tools.
- Always use the right tool for each job (to do the job more quickly and expose you to less hand-arm vibration).
- Check tools before using them to make sure they have been properly maintained and repaired to avoid increased vibration
- caused by faults or general wear.

(HAV) Vibration

- Make sure cutting tools are kept sharp so that they remain efficient.
- Reduce the amount of time you use a tool in one go, by doing other jobs in between.
- Avoid gripping or forcing a tool or workpiece more than you have to.
- Store tools so that they do not have very cold handles when next used.
- Giving up or cutting down on smoking because smoking reduces blood flow; and massaging and exercising your fingers during work breaks.
- Encourage good blood circulation by: Keeping warm and dry (when necessary, wear gloves, a hat, waterproofs and use heating pads if available)

What else can I do?

- Learn to recognise the early signs and symptoms of HAVS.
- Report any symptoms promptly to your employer or the person who does your health checks.
- Use any control measures your employer has put in place to reduce the risk of HAVS.
- Ask your trade union safety representative or employee representative for advice.

Help your employer to stop HAVS and carpal tunnel syndrome before they become a problem for you.

Where can I find out more?

For more information on vibration,

HSE's free leaflet Hand-arm vibration - Advice for employees (INDG296) (pocket card contains notes on good practice which you may find helpful)

Download HSE's free leaflet Control the risks from hand-arm vibration - Advice for employers on the Control of Vibration at Work Regulations 2005 (INDG175 - rev2) (leaflet for employers on good practice and considering what they need to do)

You can also order a copy of these publications through HSE Books.

Who can help?

Your employer has a duty to protect you and should be working on measures to reduce the risk. The law says your employer has to find out what levels of vibration you are exposed to and assess the risk to your health from vibration at work. See Advice for employers

Safety Representative/ Employee representative. Trade-union-appointed safety reps or other employee representatives can be very useful in communicating problems, inspecting documents and consulting employers over measures to meet these regulations.

Your Company Doctor or your GP. This may be an occupational health professional where you have a company occupational health scheme or your general practitioner through the NHS.

For more information, please visit the HSE website.

https://www.hse.gov.uk/guidance/topics.htm

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