



continued from inside

Guidance on tackling ULDs

The revised document, HSG60(rev), forms one strand of the support to be provided for employers, employees and those who advise them. While authored by HSE, valuable inputs were made by industry and health and safety professionals concerning the content and presentation of the guidance and the risk assessment tool to ensure that they have the right information and advice to prevent and manage ULDs in the workplace. Increased prominence is given to an active management approach, showing how employers together with their employees, can cooperate to minimise the risks of ULDs.

The need for a management approach

HSG60(rev) reflects the changes in our understanding of the risk factors and control strategies which have emerged from research over the last decade or so. This has shown the importance of psychosocial risk factors acting in conjunction with physical risk factors. For example, excessive work pressures, such as high job demands, time pressures and a lack of control over the pace of work can often act alongside physical risk factors such as repetitive physical movements or working in a compromised posture and can influence both the onset and duration of symptoms. As a consequence changes to the physical work environment on their own have been found to be less effective in tackling ULD problems, and there is increasing evidence to support an approach which addresses both organisational and physical aspects of the individual's task and work environment. HSG60(rev) recognises the need for such an approach and offers a seven stage framework:

This management framework is based on experience gained in industry and case studies show that it can be applied to good effect at all levels in business.

If I see ULD symptoms in my workplace, what should I do next?

If you have tasks where you think ULD risk factors are present, or if workers are showing symptoms of ULDs then a simple assessment of the work may be necessary.

A detailed assessment of every job could be a major undertaking and might be unnecessary, so for initial assessments a filter has been devised, which can be found in HSG60(rev) Appendix 2. This filter will help you to identify whether the risk of ULDs for a particular job is great enough to warrant a more detailed assessment. If so then a more complete assessment is provided, also in Appendix 2 which will help you identify which aspects of the job contribute significantly to the overall risk, for example poor posture due to poor workstation design. Later in the Appendix possible solutions are then given to reduce the risk of ULD, for example correct workstation heights and reach distances for a better posture. By applying the management principles and the advice given on risk assessment, control measures and early medical management, employers working together with their employees, will be able to make a real impact on reducing the toll of ill health due to upper limb disorders.

Further information:

1. HSE (2002) *Upper Limb Disorders In the Workplace*, HSG 60 (rev), HSE Books, Sudbury. ISBN 0 7176 1978 8
2. HSE (2002) *Aching arms in small businesses*, INDG 171 (rev1), HSE Books, Sudbury. ISBN 0 7176 2600 8
3. HSE (2003) *Working with Display Screen Equipment*, L26, HSE Books, Sudbury. ISBN 0 7176 2582 6
4. HSE (2003) *Manual Handling*



the newsletter of the Sheffield Occupational Health Development Group

Tackling upper limb disorders - a medical approach

H. A. Bird, Professor of Pharmacological Rheumatology, University of Leeds

Introduction

Upper limb disorders (ULDs) is the term used to describe a collection of disorders arising in the arm as a result of ergonomic stress, which may come from the workplace or may come from hobbies at home. Where an ULD exists, appropriate treatment should be given. However, there remains a group of patients in whom no specific condition can be identified but who still seem to have persistent symptoms as a result of their work. Originally this condition was described as repetitive strain injury or 'RSI'. However, several subsequent terms have been suggested, such as 'work related upper limb disorder'.

History taking is very important to exclude other rheumatological conditions. The following symptoms are important to consider:

1. Joint pain that mimic conditions such as early rheumatoid arthritis or lupus and cervical spondylosis (neck disease with referring pain to the hand).
2. Symptoms of localised tendon inflammation such as de Quervain's tenosynovitis or epicondylitis. In addition carpal tunnel syndrome may be a contributing factor to existing symptoms
3. Any Work-related upper limb symptoms.

A detailed ergonomic history taking should also be taken where the worker would mime each activity required as part of their job.

A specific change in task at work with an



onset of symptoms within a few weeks, (considering any hobbies that the worker might have started), becomes highly suggestive of work-related symptoms. Job related pressure should also be considered and this will vary between different occupations. For free-range poultry workers this would be the week before Christmas, while the retail staff may be working their hardest during January sales.

Examination

Careful examination will help to rule out other conditions.

- Joint diseases (Rheumatoid Arthritis, Seronegative spondylarthritis and Lupus)
- Tendon Inflammation (de Quervain tenosynovitis, epicondylitis)
- Compressed nervous tissue (carpal tunnel syndrome)

The examination should be by test-resisted movement and by mimicking the movement that is encountered at the workplace.

Additional important features are:

- Vigilance for features that might place individuals at slight constitutional risk. We have the impression that those with 'average' build are less likely to encounter overuse syndromes than those who are short and fat or long and thin, this particularly applies to the shape of the fingers. A slight lateral curvature of the spine often previously undetected undoubtedly predisposes to upper arm problems in the workplace.
- We also have the impression that individuals with hyperlax joints may be particularly susceptible, presumably because extra muscular effort is required to maintain them in the physiological position of neutrality before work commences.

continued overleaf

In this issue

Tackling upper limb disorders - a medical approach

H. A. Bird, Professor of Pharmacological Rheumatology, University of Leeds

Tackling upper limb disorders - a management approach

Mr M Birtles, Senior Scientist Health and Safety Laboratory

Editorial

Welcome to the Autumn 2004 edition of Healthy Work Matters. In this issue and accompanying network meeting, we have focused on the issue of "Upper Limb Disorder". The newsletter contains interesting articles outlining the issue surrounding the clinical aspect of ULD, how to investigate the condition and its management. The second article deals with the HSC priority and HSE policies and how to undertake risk assessment for ULD. The lunchtime network meeting will concentrate on an introduction to ULD. We have also organised an accompanied workshop to follow which will focus on issues such as history taking, immediate management, risk assessment and work place intervention.

We would also like to inform you that we will be expanding our activities in the region through "South Yorkshire and Humberside Regional Group". This group will allow us to exchange information and ideas at the regional level.

We encourage you to send in your thoughts, comments and views on the Newsletter and any occupational health issues you would like us to cover. Also don't forget to visit our website which contains useful information and back issues of the newsletter.

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continued from front cover

It is also likely that just as joint hypermobility can result from several causes so the observed syndrome of a 'work-related upper limb disorder' may also be multi-factorial in aetiology. Different pathological aetiologies have been suggested which may contribute to non-specific symptoms. They are:

- Variety of Vague concept of micro-trauma,
- Inherited abnormalities of muscle metabolism,
- Sub-clinical compartment syndrome and
- Pure overuse syndrome (perhaps characterised by a mild degree of lactic acidosis).
- In addition, some commentators have observed a relatively close link between ULD and reflex sympathetic dystrophy (complex regional pain syndrome type 1) and
- fibromyalgia (which is a rheumatic condition with abnormal pain perception and sleep disturbance that is disabling but not destructive)

Investigations

The most important investigation is a careful history taking and examination. After that if time and finances permit clinical investigation should be sought on

- acute phase reactants which if normal will exclude inflammatory arthritis
- Muscle enzymes (they are invariably normal for ULD)
- ANF and rheumatoid factor will tend to exclude specific diseases;
- An x-ray of the hand and wrist may exclude localised osteoarthritis
- If pain is often accompanied by 'numbness' and if abnormal sensation such as burning, pricking and tingling predominates (and certainly if there are clinical and neurological signs), nerve conduction studies are likely to be helpful. These should be complemented by an x-ray of the cervical spine to detect possible nerve root compression.



Immediate management

If a work-related upper limb disorder is thought to be the diagnosis, it can be managed as follows;

1. Patient education and
2. An avoidance of the task that caused the problem.

This does not necessarily mean complete cessation of work. Sometimes a modification of the job, or transfer to a different department in the factory may help the symptoms. Unfortunately for keyboard users this may be less practical. The amount should be spread equally throughout the working day. On return to work, the position of the keyboard, the chair, the stretch required, the position of the forearms should be assessed, as should the ergonomic qualities of the mouse.

- If simple modifications of this sort don't to help, a longer period off work (1-2 weeks) might be tried. If the patient is still unable to return, specialist help should then be sought. By this stage, any occupational health service is also likely to be involved.

Most overuse problems get better spontaneously with time (usually over a period of weeks or months) providing the cause is known and removed. Hobbies that might aggravate should be avoided. A good example is musicians playing several instruments may need to switch to the one that troubles them least, gradually building up their exercise tolerance in respect of those that cause difficulty. Once the first improvement is noted often the worker returns back to normal tasks. It is safer to advise a cautious return of perhaps 3-6 months. The shorter the history the speedier will be the recovery. Workers who have had symptoms for two years or more may take 5-years before seeing a return to normal.

- Analgesics (Pain killers) may relieve symptoms but should be taken cautiously as they may hide the symptoms. This could lead the workers to return to their tasks before full recovery has been made.
- Non-steroidal anti-inflammatory drugs (such as ibuprofen, or diclofenac) are not as helpful in this condition but occasionally help.
- Painkilling ointment may be of benefit.
- A dose of amitriptyline or dothiepin at night may help.

Onward referral

Most workers can be managed with a change in tasks at work. However, referral to orthopaedic surgeons may be required to manage the different pathology of ULD.

A carpal tunnel may respond to an injection of steroid and may require surgical decompression. Sports medicine specialists have considerable practical experience and tend to consider the whole body rather than the arm. Rheumatologists will be familiar with the problem as well as ergonomics. But in some cases referral to musculoskeletal physicians may prove more helpful.

Physiotherapists or occupational therapists with an interest in ergonomic problems would also be helpful in management of these workers. In our own unit a physiotherapist concentrating on posture, the spine and possibly the shoulder, and working in conjunction with an occupational therapist specifically trained in ergonomic assessment of the hand and hand function, has proved an effective combination. Most patients find their visits to such specialised departments helpful though the aim is a reduction in symptoms and time to recover rather than an immediate cure, a point of which the patients should always be aware.

Osteopaths have stepped into this role to some extent and many patients find Pilates particularly helpful, which seems to strike the correct balance between relaxation and the modest exercise needed to avoid disuse atrophy.

The RSI Association has details of practitioners with expertise in this field.

The important points are that poor posture (often associated with a slight spinal twist) and inherited relative joint hyperlaxity both seem to be the predisposing factors. There may be others such as an anatomical physique that predictably is unlikely to cope with a particular task. Computer keyboards, for example, come in standard sizes, making no concession to short fat or long thin fingers.

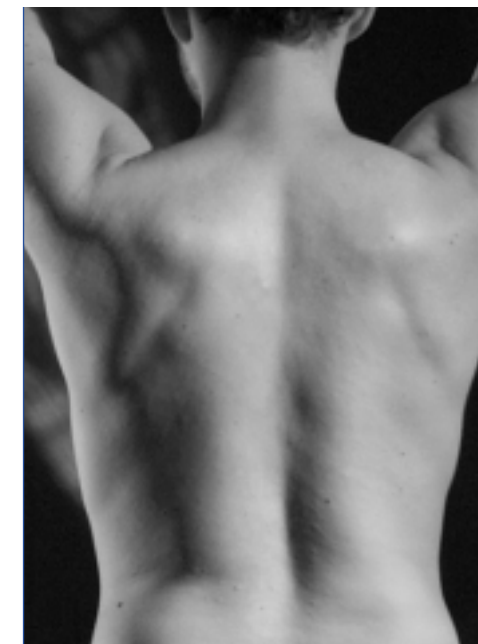
Tackling upper limb disorders - A management approach

Mr M Birtles, Senior Scientist, HSL

Upper limb disorders (ULDs) are a major cause of occupational ill health in the UK and along with other musculoskeletal disorders have been identified as a priority for action in the Health and Safety Commission (HSC) Strategic Plan for 2001-2010.

What are ULDs?

The phrase "upper limb disorder" is a general label used to refer to a range of medical conditions, which are caused or made worse by work. Other people call them different things, like repetitive strain injury, cumulative trauma disorder, and occupational overuse syndrome. The term "upper limb" refers to the part of the body, which include practically all the tissues (skin, bone, muscle, nerves, blood vessels, etc.) between the fingers and the shoulder and includes the neck. The term "disorder" refers to the clinical effects produced by underlying changes in the tissues, which may comprise of symptoms such as pain, tingling, swelling, numbness, stiffness, weakness, restricted movement, loss of sensation and many other less common symptoms. Saying this, many people commonly experience pain at some time and while the pain may be in the upper limbs, this does not necessarily mean somebody has an ULD.



Such a serious problem?

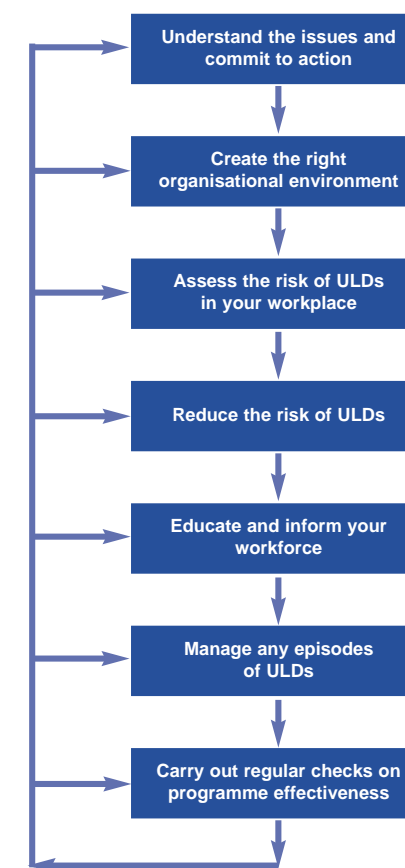
Musculoskeletal disorders (MSDs), including ULDs, are by far the most common form of work-related illness in the UK and risk factors can be found in most occupations and workplaces. It is estimated 1.2 million people suffer from a work-related MSD representing about 60% of all individuals who suffer work-related ill health (Labour Force Survey 2001/2002). This clearly represents a heavy cost in terms of individual suffering, loss of earnings and in some cases, loss of the ability to work. Costs to employers including sickness absence, reduced productivity, staff replacement and training and the costs of meeting compensation claims from injured workers were estimated to be at least £200 million.

An HSC Priority!

HSC's plans for tackling musculoskeletal disorders are one of its 8 Priority Programmes and they have set challenging targets, in co-operation with employers, employees, trade unions, employer's organisations, health professionals and voluntary groups. The targets for the HSC Priority Programme for MSDs, are:

A 20% reduction in incidence of work-related ill health caused by MSDs by 2010;
A 30% reduction in the number of working days lost due to MSDs by 2010.

The Priority Programme for MSDs aims to improve compliance with the law, to promote continuous improvement, and to develop the necessary knowledge, skills and support systems to achieve the above targets.



Framework for the management of ULDs risks

continued on back page