Work Related Upper Limb Disorders

Introduction

Work related upper limb disorders (WRULDs) have also been referred to as repetitive strain injuries (RSI) or musculoskeletal disorders of the upper limbs cover a range of some 20 medical conditions, which include tenosynovitis and carpal tunnel syndrome. Some have less specific symptoms, and some cases have been highly controversial.

The conditions are often difficult to treat and are very painful. They can be disabling, often permanently. They are a growing cause of concern in the workplace and they are not restricted to keyboard work, but can occur in a wide range of situations, including manufacturing, e.g., poultry processing; electronics. Although these conditions can be caused or at least made worse by work, they can also be caused by other activities such as sports or housework, e.g., tennis elbow.

Most people will suffer from aches and pains from time to time and if they do occur, it is easy to ignore them, but if the pains persist in the muscles used for a job, or if several people in a workplace suffer from the same aches and pains, these symptoms should be taken as a warning of the increasing risk of WRULDs.

Identifying WRULD Risks

WRULDs can occur in jobs that require repetitive finger, hand or arm movements. These could be twisting, pressing, squeezing, pushing, pulling, lifting or any number of similar movements.

Although the most well known cases have been in display screen equipment operators, they can and do occur in many manual jobs, particularly if it is repetitive work such as on a production line, assembly, packing or inspection.

Risk Assessments

WRULDs should be considered as part of the general risk assessment carried out under the Management of Health and Safety at Work Regulations 1999 (Reg. 3) or as part of a special assessment such as required by the Health and Safety (Display Screen Equipment) Regulations 1992 or even the Provision and Use of Work Equipment Regulations 1998. As with any assessment, the first step is to identify any hazards that could present a significant risk of injury.

Look for any warning signs. For example:

- Actual cases of WRULDs in the workplace.
- Complaints by workers, such as aches and pains in the hand, wrist, arm or shoulder. Have employees been asked if they have any of these conditions?
- Home-made or improvised changes to workstations or tools such as handles cushioned or made longer, seat padding.
- Workers wearing bandages, splints, rub-ons, copper bracelets or magnets

Although repetition is the main concern, it is not the only factor which leads to increasing the risks. The other factors include the amount of force used in the task, posture, work rates and recovery times, and all need to be considered.

Risk Factors

Need For a Lot of Force

Does the job involve:

- Strong force at the same time as awkward movements or posture e.g. bent wrists, work with arms raised or fully extended?
- Forceful use of hand/forearm muscles?
- Trying to do something with ill fitting components by forcing them into place?
- Tools not ideal for repetitive or frequent use particularly if squeezing, twisting or hammering actions required?
- Use of equipment designed for a larger or stronger person?
Rapid, Awkward or Frequent Movement

Does the job involve:
- Machine pacing e.g. to keep up with a conveyor?
- Frequent repetition of the same small number of movements?
- Pressures on employees to work fast e.g. from piecework or bonus payment systems?

Awkward or Static Posture

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

Work for Long Periods without Breaks or Changes of Activity

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

Reducing the Risks

By analysing the tasks it will be possible to identify what aspects or parts of the task cause the risks, using the above as a checklist. Having identified the problem, consider what can be done to solve it.

This could involve:
- Redesign of the workplace, seating or equipment, etc.
- Redesign of the task
- Providing alternative tools
- Consider the scope for automation or mechanisation
- Changing the pace or order of the work
- Training of the workers
- Adding more variety of jobs being carried out
- Introduction of job rotation
- Consideration of ergonomic solutions.

Try to involve employees in finding solutions and consult them on bringing in changes. You may need to try out several solutions. Provide re-training if necessary.

Key Action Steps

- Carry out risk assessments under the Management of Health and Safety at Work Regulations, 1999 involving the employees concerned where possible.
- Pay particular attention to any signs of WRULDs.
- Tackle the more serious risks or those affecting a large number of people first
- Consider work routines, i.e., is there repetition of activities, is heavy force required and does the job involve awkward movement?
- Try to make the tasks or workstations suitable for each worker, rather than make the worker adapt to fit the task or workstation
- Implement control measures in order to reduce the risks of WRULDs.
- Monitor to check that the control measures are effective. This may include the implementation of appropriate health surveillance

References

- Upper Limb Disorders in the Workplace: A guide to Prevention HSG 60, HSE Books 2002
- Caring for cleaners – Guidance and case studies on how to prevent musculoskeletal disorders HSE Books 2003
- If the Task Fits - Ergonomics at Work IND(G) 90L, HSE Books 1997
- Upper Limb Disorders - Assessing the Risks INDG 171 HSE Books 1994
- Checkouts and musculoskeletal disorders INDG269 HSE Books 1998
- Consideration of ergonomic solutions.

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Ref No 6019 (v6)