

WORK RELATED UPPER LIMB DISORDERS (WRULDs)

(See also: [Ergonomics\(25\)](#); [Accident Reporting \(RIDDOR\)\(4\)](#))

INTRODUCTION

Musculoskeletal problems affecting the upper limbs are all common in the general population. Symptoms include aches and pains, difficulty in movement and swelling. Links between some work activities and these disorders have long been recognised. Reliable statistics on the incidence and prevalence of WRULDs are not available although one recent study indicated an occupational association in about 13% of cases attending an orthopaedic clinic.

WRULDs can occur throughout industry and are not specific to one particular sector. There is recognition that musculoskeletal conditions can arise spontaneously and without any link to work. However, it is clear that WRULDs can be caused or made worse by work, although other activities may be involved in some cases.

WRULDS are often associated with a number of serious consequences, including:-

- employees experiencing problems with persistent pain or actual injury
- poor product quality or output
- high sickness absence, staff turnover, recruitment difficulties
- rise in compensation claims.

They therefore warrant prompt action.

Some musculoskeletal conditions are reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995. These are:-

- (i) cramp of the hand or forearm due to repetitive movements
- (ii) heat conditions (of head, knee or elbow)
- (iii) traumatic inflammation of the tendons of the hand or forearm or of the associated tendon sheaths
- (iv) carpal tunnel syndrome
- (v) hand-arm vibration syndrome

WHAT CAUSES WRULDs?

These can be grouped into three general areas:-

- 1. Force** - the application of undesirable manual force
- 2. Frequency and duration** of movement, including unsuitable rates of working or repetition of a single element

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3. Awkward posture of the hand, wrist, arm or shoulder

Problems may be caused by only one of these or more often by a combination or interaction between two or all three.

WRULDs can occur therefore in jobs that require repetitive finger, hand or arm movements; twisting movements; squeezing; hammering or pounding; pushing, pulling, lifting or reaching movements. Both office and manual jobs can cause WRULDs, eg, assembly line work, meat and poultry preparation, keyboard users, hand tool and powered tool users.

PREVENTIVE MEASURES

(i) Risk assessment - this should concentrate on identifying whether specific risk factors are present and the degree to which they may affect the likelihood of injury. Many people find that a checklist helps them decide:

- if employees are at risk
- whether they need to take more precautions, and
- what to do.

Leaflet IND(G) 171 (L) contains a good, easy-to-use checklist that can be used to assess WRULDs. It is important to involve those people doing the work, at possible risk from WRULDs, as they should know what the problems are.

(ii) Follow up action/solutions - these may be based on ergonomic principles of either work design or organisational arrangements as follows:-

(A) WORK DESIGN

- Reduce force levels - reduce force required, spread the force, get better mechanical advantage, consider effects of any hand protection already provided, maintenance of tools, training
- Reduce highly repetitive movements - to include job enlargement, mechanisation, automation, reduction of machine pace
- Postural changes - redesign or modify the operation or product, alter the tools or controls, move the part or move the operator.

(B) ORGANISATIONAL ARRANGEMENTS

- Training and instruction considerations
- New employees (at greater risk of WRULDs) considerations
- Job rotation?

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CHECKLIST - WRULDs

1. Do you know if your employees are at risk from WRULDs? YES NO
2. If you suspect so, do you use a checklist to aid risk assessment and identify possible precautions? YES NO
3. Are you aware of the need to report certain musculoskeletal conditions under RIDDOR 1995? YES NO

REFERENCES/FURTHER DETAILS

- *1. Leaflet INDG171 (rev1). 'Aching arms (or RSI) in small businesses. Is ill health due to upper limb disorders a problem in your workplace?' (HSE) (2/03).
www.hse.gov.uk/pubns/indg171.pdf
- *2. Booklet HS (G) 60 - Work related upper limb disorders - a guide to prevention (HSE) ISBN 0 11 885565 4
- *3. Leaflet INDG 338 (03/01) C1500 'Power Tools: how to reduce vibration health risks' guide for employers (HSE) ISBN 0 7176 2008 5.

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- * Available to view by prior arrangement at Nuneaton and Bedworth Borough Council, Environmental Health Services, Council House, Coton Road, Nuneaton. CV11 5AA
- ** Free copy available from Nuneaton and Bedworth Borough Council at the above address.

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