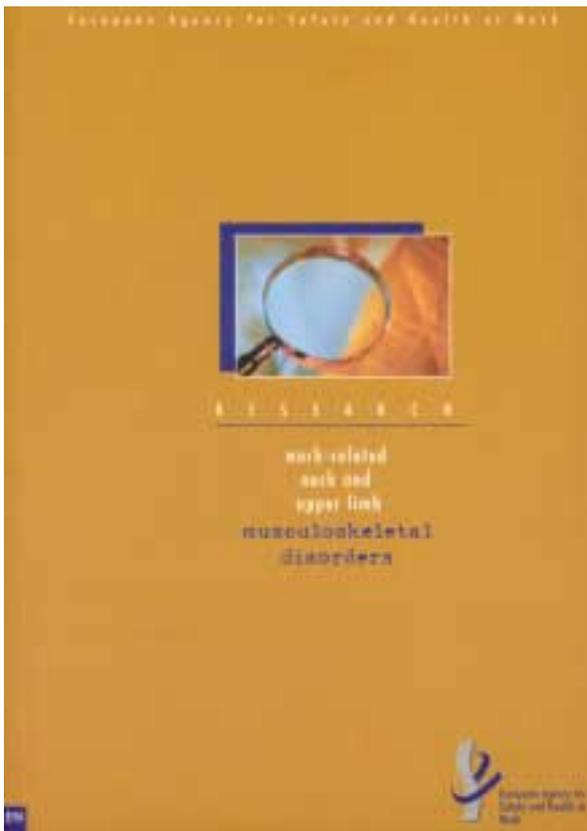




Work-related neck and upper limb musculoskeletal disorders: Summary of Agency report

Work-related neck and upper limb musculoskeletal disorders (WRULDs) are one of the most common work-related ailments affecting millions of European workers across all employment sectors. This fact sheet highlights the key findings of an Agency report that has taken stock of the extent, cause and prevention of problem.



The report on Work-related Neck and Upper Limb Musculoskeletal Disorders (WRULDs) was commissioned and published by the European Agency for Safety and Health at Work. The report reviews current scientific knowledge of the causes of WRULDs and strategies for managing them. The content was endorsed by an expert scientific panel. Employer and employee representatives as well as a number of official authorities from European Member States also had an input. The work was initiated at the request of the European Commission and carried out by the University of Surrey, U.K.

Key conclusions and recommendations

- current scientific knowledge already provides employers with enough information to protect those workers at greatest risk of developing WRULDs.
- consultation is needed to resolve the lack of standardised methods available to Member States for dealing with WRULDs.
- further research is needed in a number of areas.

Size of the problem

There is substantial evidence within the European Union (EU) that WRULDs pose a significant problem with respect to ill health and associated workplace costs. The size of the problem is likely to increase because workers are becoming more exposed to workplace risk factors for these disorders.

The available data from the Nordic countries and the Netherlands suggest that the cost of WRULDs is between 0.5% and 2% of Gross National Product.

Although studies show that WRULDs affect a substantial proportion of workers in all Member States the reported incidence rates appear to vary greatly between different Member States. Direct comparison of data collected and analysed in different ways is difficult and little is known about how reliable the information is. Despite this, studies that used a similar design have reported large differences. The reasons for these differences require further investigation.

Groups at Risk

WRULDs can occur across all types of jobs and work sectors. However, some types of employment groups seem to be particularly at risk:

Specific industries with high exposures and groups at high risk include:

- agriculture, forestry and fisheries
- manufacturing, mining
- machine operators
- craft workers, tailors
- construction
- wholesale, retail and repairs
- hotels, restaurants and catering
- Secretaries, typists
- Loaders/unloaders

Evidence suggests that WRULDs affect women more than men largely because of the type of work they do than because of any gender or other personal factors. The importance of gender differences, and their implication for work system design, was largely outside the scope of the report but requires more investigation.

Biological origins of disorders

There are strong arguments that WRULDs have a biological basis. Scientific studies concerning biomechanics, mathematical modelling and direct measurement of physiological changes provide a coherent and persuasive argument of the biomechanically induced pathology of disorders that affect muscle, nerves, tendons and other body tissues.

The understanding of the biological mechanisms of WRULDs varies greatly between specific disorders. For carpal tunnel syndrome, for example, the knowledge is impressive, whereas for some other disorders more research is needed. But even for those disorders where the knowledge base is smaller there are plausible hypotheses for a biological origin and research is ongoing.

Work-relatedness of WRULDs

The scientific reports established a strong positive relationship between some WRULDs and performing work, especially where workers were highly exposed.

The following work factors increase the risk of WRULDs:

- poor posture
- highly repetitive movements
- forceful hand applications
- hand-arm vibration
- direct mechanical pressure on body tissues
- cold work environments
- how work is organised
- how workers perceive the work organisation (psychosocial work factors)

Understanding of the interactions between risk factors (the effect combinations of exposure have on the overall level of risk of injury) is more limited. This means that it is difficult to give precise estimates of the level of risk of injury for varying exposures to risk factors in the workplace. Nevertheless workers in extreme exposure groups can and should be identified. This should be a priority for any preventative strategy.

Research shows that reducing the biomechanical load on the body from exposure to workplace risk factors reduces the prevalence of neck and upper limb musculoskeletal disorders. This provides further evidence of a relationship between performing work and these disorders.

Scope for prevention

Current scientific knowledge and existing general advice in European health and safety directives and elsewhere already provide some strategies for preventing WRULDs. These include:

- risk assessment
- health surveillance
- employee information
- training
- ergonomic work systems
- prevention of fatigue

Ergonomics intervention includes looking at the effect of the whole workplace, equipment, work methods and work organisation etc. to identify problems and solutions. Appropriate ergonomics intervention for any single specific disorder is likely to help prevent other disorders. This is because of the common biological processes involved in some of the disorders.

Organisations already involved in preventative ergonomics and occupational health programmes should help promote action in other organisations. They should also be encouraged to evaluate the effectiveness of the preventative programmes.

Need for EU consensus

Current scientific knowledge already provides employers with information to protect those workers at greatest risk. However, the report also suggests a need for further consultation and standardisation at EU level in a number of areas:

- Standardised criteria for assessing WRULDs across the EU are not yet available.
- Further consultation is needed on the assessment of risk of WRULDs in order to develop a standardised approach.

How to get the report

The full text of the report in English is available in the Agency's Web site at <http://agency.osha.eu.int/publications/reports/>.

The printed report - "Work-related neck and upper limb musculoskeletal disorders", Buckle, P., Devereux J., European Agency for Safety and Health at Work, 1999, ISBN 92-828-8174-1 - can be ordered from the EC's Publications Office EUR-OP in Luxembourg (<http://eur-op.eu.int/>), or from its sales agents. The price is 7 EURO (excluding VAT).

EU information campaign on Musculoskeletal Disorders.

"Turn your Back on Work-Related Musculoskeletal Disorders" is the theme for European Week for Safety and Health at Work being run by the 15 European Union Member States in October 2000. The Agency has produced factsheets and other information products to support the Week. <http://osha.eu.int/ew2000/> is the direct link to European Week information.