European approach to tackling work-related MSDs

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Overview

- Data on MSDs
- European Agency for Safety and Health at Work (EU-OSHA) good practice information
- NAPO video
Work-related musculoskeletal disorders

Complex nature of MSDs:
- multifactorial aetiology
- various risk factors (physical, ergonomic, psychosocial) and its combinations
- numerous intervention methods….
Factors that can contribute to MSDs

Physical factors:
- **Force** application, e.g. lifting, carrying, pulling, pushing, use of tools
- **Repetition** of movements
- Awkward and static **postures**, e.g. with hands above shoulder level, or prolonged standing and sitting
- Local **compression** of tools and surfaces
- **Vibration**
- **Cold** or excessive **heat**
- Poor **lighting**, e.g. can cause an accident
- High **noise** levels, e.g. causing the body to tense

Organisational and psychosocial factors:
- Demanding work, lack of **control** over the tasks performed, and low levels of **autonomy**
- Low levels of **job satisfaction**
- Repetitive, monotonous work, at a high **pace**
- Lack of **support** from colleagues, supervisors and managers
Emerging physical OSH risks: Expert forecast

Top ten emerging OSH physical risks identified in the survey (Y-axis: mean values on the one-to-five-point Likert scale and standard deviations; X-axis: risks)

1. Lack of physical activity
2. Combined exposure to vibration and awkward postures
3. Poor awareness of thermal risks among low-status worker groups exposed to unfavourable thermal conditions
4. Multi-factorial risks
5. Combined exposure to musculoskeletal disorder and psychosocial risk factors
6. Thermal discomfort
7. Combined exposure to vibration and muscular work
8. Complexity of new technologies, work processes and human-machine interfaces
9. Insufficient protection of high-risk groups against long-standing ergonomic risks
10. General increase of exposure to ultraviolet radiation during and outside working time

Scale:
1 = Strongly disagree
5 = Strongly agree

Source: Agency report « Expert forecast on emerging physical risks related to OSH », 2005
http://osha.europa.eu
Exposure to physical risks

**Figure 17:** Exposure to physical risks over time (% exposed quarter of time or more)

- Vibrations
- Noise
- High temperatures
- Low temperatures
- Breathing in smoke/dust and/or vapours
- Chemical substances
- Tiring or painful positions
- Heavy loads
- Repetitive hand or arm movements

Source: 5th EWCS
Work intensity

Q: Does your job involve working at very high speed?

Source: 5th EWCS
% of workers reporting work-related health problems, EU-27

35% of workers report that work affects their health, of those

- Backache: 24.7%
- Muscular pains: 22.8%
- Fatigue: 22.5%
- Stress: 22.3%
- Headache: 15.5%
- Irritability: 10.5%
- Anxiety: 7.8%
- Hearing: 7.2%
- Respiratory problems: 4.7%

Source: 4th EWCS, 2005
http://osha.europa.eu
% of workers reporting work-related health problems

Source: EWCS, 2000; ESCC, 2001
http://osha.europa.eu
For each of the following issues, please tell me whether it is of major concern, some concern or no concern at all in your establishment.

% establishments, EU27

Source: ESENER, 2010
Tackling work-related MSDs

Promoting an integrated management approach to tackle MSDs:

- **Prevention** of MSDs by addressing the whole load on the body, including ergonomic and organisational aspects of work
- Managing the retention, rehabilitation and return to work of those who suffer, or have suffered, MSDs

* European OSH campaign 2007
Work-related musculoskeletal disorders: Prevention report
Organisational and administrative interventions

- A reduction in daily working **hours** may reduce MSDs
- The introduction of additional **breaks** into repetitive work may be achievable without loss of productivity

Technical interventions

- Technical **ergonomic** measures can reduce the workload on the back and upper limbs (e.g. in the case of ergonomic hand tools), and thus the occurrence of MSDs, without the loss of productivity

Protective equipment

- There is no conclusive evidence to support **back belt** use to prevent work-related low back pain
Behavourial modification

- **Training** on working methods in manual handling is not effective if it is used as the only measure to prevent low back pain.

- **Physical training** can reduce the recurrence of back pain and neck-shoulder pain. But to be effective, the training should include vigorous exercise and be repeated at least three times a week.

Implementation strategies

- A combination of several kinds of interventions ([multidisciplinary approach](#)) – including organisational, technical and personal measures – is needed to prevent MSDs. Interventions based on single measures are unlikely to prevent MSDs.

- A [participative approach](#) that includes the workers in the process of change may have a positive effect on the success of an intervention.
Work-related musculoskeletal disorders: Back to work report
Focus on integrating people with disabilities into the workforce who are **not** currently employed, rather than on workers who have developed MSDs at work.

- **Early recognition** of problems and avoidance of long-term incapacity for work, including returning people with MSDs to work as quickly as possible.

- **Provision of comprehensive care** including medical, occupational and social rehabilitation.
More EU-OSHA good practice
Musculoskeletal disorders (MSDs) can affect the body's muscles, joints, tendons, ligaments, bones and nerves.

Most work-related MSDs develop over time and are caused either by the work itself or by the employees' working environment. They can also result from accidents, e.g. fractures and dislocations. Typically, MSDs affect the back, neck, shoulders and upper limbs; less often they affect the lower limbs.

Health problems range from discomfort, minor aches and pains, to more serious medical conditions requiring time off work and even medical treatment. In more chronic cases, treatment and recovery are often unsatisfactory - the result could be permanent disability and loss of employment.

Many problems can be prevented or greatly reduced by complying with existing safety and health law and following guidance on good practice. This includes assessing the work tasks, putting in place preventive measures, and checking that these measures stay effective.

MSDs are a major problem.

For the employee, they cause personal suffering and loss of income; for the employer, they reduce business efficiency; and for government, they increase social security costs.

MSDs are a priority for the EU in its Community strategy on occupational health and safety. They are also a recognised priority by the EU Member States and European Social partners.

Read the Key facts

Agency publications on Musculoskeletal Disorders
Practical Solutions

The European Agency for Safety and Health at Work monitors, collects and analyses scientific findings, statistical information and **prevention measures**. It also supports the exchange and sharing of information. If you are involved in workplace health and safety, you can use this section to find **practical information, guidelines** and **case studies** to help solve a variety of problems.

**Good practice** that has been implemented successfully in one workplace can be adapted and used elsewhere. However, before good practice information is applied, an assessment of the hazards and risks present in the workplace should be carried out, making reference to relevant national legislation.

While EU-OSHA is not responsible for the content of external internet sites to which it links, we aim to ensure that we only link to good practice information that is reliable and meets identified criteria for prevention. These include following: the 'prevention hierarchy' set out in EU legislation, which includes starting with prevention at source and prioritising collective measures over individual ones and; ensuring the participation of workers.

More detailed information on good practice collection, evaluation and dissemination can be found in our [Good Practice Information](http://osha.europa.eu) provided by EU-OSHA.

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**Latest additions**

**Improving quality and productivity at work - Community strategy 2007-2012 on health and safety at work**

09.07.2010 - Modified: 09.07.2010

The European Commission proposes in its Communication a strategy for promoting health and safety at work in the European Union from 2007 to 2012. The overall objective of the strategy is to reduce...

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Case study: Skeleta un muskuļu sistēmas problēmu risinājumi aklo cilvēku pavadoņsuņu treneriem un kustības traucējumu novēršanas instruktoriem

Name of the organisation(s)
The Guide Dog for the Blind Association - Health and Safety Team

Valsts:
United Kingdom

The issue
Suņu apmācība aklu un vājredzīgu personu vajadzībām ir ar kreiso roku veicams darbs, kas suņu treneriem / kustības traucējumu novēršanas instruktoriem rada vienpusīgu slodzi:

- uz kreisās plaukstas locītavu, apakšdelmu un elkoni – satvērējena noturēšana, spēka pielietojums, apakšdelma rotācija;
- uz kreisās plaukstas locītavu – kustības mēģinājumi, kustības ūdens kārtība;
- uz kreisās plaukstas locītavu – kustības ūdens kārtība;
Checklist for the prevention of lower limb disorders

Part A: Introduction

Work-related lower limb disorders (LLDs) are impairments of body structures such as a tendon, muscle, nerve, joint and bursa caused or aggravated primarily by the performance of work and by the effects of the immediate environment where the work is carried out. They can affect the lower extremities, mainly hip, knee and foot.

The main risk factors of work-related lower limb disorders include squatting, kneeling, pushing on pedals, and prolonged standing or walking.

This checklist concerns hazards for injury or development of disorders to the lower limb and is targeted at people engaged in workplace hazards identification. Though limits have been indicated, these are based on the associations that have been reported in the current literature and may change with future research that provides better scientific evidence. In addition, this checklist offers examples of preventive measures that can help to reduce LLDs risks.

How to use a checklist:
- A checklist can help identify hazards and potential prevention measures and, used in the right way, forms part of a risk assessment.
- This checklist is not intended to cover all the risks of every workplace but to help you put the method into practice.
- A checklist is only a first step in carrying out a risk assessment. Further information may be needed to assess more complex risks and in some circumstances you may need an expert's help.
- For a checklist to be effective, you should adapt it to your particular sector or workplace. Some extra items may need to be covered, or some points omitted as irrelevant.

Checklist for the prevention of WRULDs

Part A: Introduction

Work-related neck and upper limb disorders (WRULDs) are impairments of body structures such as a tendon, nerve, muscle, joint, bursa or the localised blood circulation system. Principally, they are caused by the performance of work and by the effects of the immediate environment where that work is carried out. Symptoms include pain and/or reduced ability to function normally. As the term WRULDs suggests, any region of the neck, shoulders, upper arms, elbows, forearms, wrists and hand can be affected. More information is available in the European Agency for Safety and Health at Work’s factsheet (http://osha.europa.eu/en/publications/factsheets/110.pdf) and E-Fact (http://osha.europa.eu/en/publications/factsheets/758.pdf) on WRULDs.

This checklist aims to provide employers, workers, their supervisors and OSH professionals with basic information about WRULDs and how they may be prevented. It helps to identify the particular factors that can contribute to workers developing these disorders. Furthermore, it gives examples about the practical steps that can be taken to prevent or reduce the risks of workers sustaining WRULDs. This approach is based upon the application of ergonomics — the study of the relationship between workers and their environment — which aims to design better working systems by matching work demands to the capacities, capabilities and characteristics of the full range of individuals in the workforce. It provides a systematic approach to identifying problems and introducing solutions.

The risk factors that may cause or contribute to WRULDs can be grouped into three categories:
- Physical risk factors such as work involving awkward postures or repetitive movements;
- Psychosocial risk factors, which are associated with levels of workplace stress;
- Individual risk factors, which vary according to an individual’s own characteristics.

There are two important factors to look out for at work:
- the size of the load: the amount of physical effort applied, including the weights that are handled or the forces to be resisted; and
- time: the length and frequency of the physical activity leading to tiredness and the resulting need for recovery.

Checklist for preventing bad working postures

Part A: Introduction

A good working posture is a prerequisite for preventing work-related musculoskeletal disorders (MSDs). These are impairments of the body structures such as muscles, joints, tendons, ligaments and nerves, or localised blood circulation systems that are caused or aggravated primarily by the performance of work and by the effects of the immediate environment where the work is carried out. A good posture is one that is comfortable and in which the joints are naturally aligned — the neutral body posture. Work with the body in a neutral position reduces stress and strain on the muscles, tendons, and skeletal system, and therefore reduces the risk of workers developing MSDs.

Awkward postures are those where the various parts of the body are not in their natural position. As a joint moves further away from its natural position, more muscular effort is needed to achieve the same force and muscle fatigue occurs. Moreover, non-neutral positions can increase the strain on tendons, ligaments and nerves. They increase the risk of injury and should be avoided if at all possible.

How to use a checklist:
- A checklist can help identify hazards and potential prevention measures and, used in the right way, forms part of a risk assessment.
- This checklist is only a first step in carrying out a risk assessment. Further information may be needed to assess more complex risks and in some circumstances you may need an expert’s help.
- For a checklist to be effective, you should adapt it to your particular sector or workplace. Some extra items may need to be covered, or some points omitted as irrelevant.


WRULDs

On-going activities relevant to MSDs

Healthy Workplaces Campaigns:
- 2012-13: Working together for risk prevention:
  - Leadership
  - Workers participation
- 2014-15: Practical solutions for psychosocial risks

OiRA (Online interactive Risk Assessment Tool):
- Hairdressers (Cyprus)
- Road transport (France)
- Leather and tanning (EU)
- Office work (Cyprus)
- Maintenance
- Psychosocial risks

Older workers project, 2013-2015

ESENER (enterprise survey), 2013-14:
- Work-related MSDs
- Psychosocial risks
Thank you!!!

More information:

MSDs

EU-OSHA
https://osha.europa.eu

NAPO

podniece@osha.europa.eu
NAPO – Modern Stressful Times