



Healthy Workplaces Campaign 2020-22

LIGHTEN THE LOAD

Introduction to Musculoskeletal Disorders (MSDs) prevention

Overview

- **What are work-related MSDs?**
- **Parts of the body typically affected**
- **MSD risk factors**
 - physical and biomechanical
 - organisational and psychosocial
 - individual factors
- **Risk assessment**
- **Tackling MSDs**
- **The general principles of prevention**



What are work-related MSDs?

■ Impairments of bodily structures, such as:

- Muscles
- Joints
- Tendons
- Ligaments
- Nerves
- Bones



Pain



Numbness



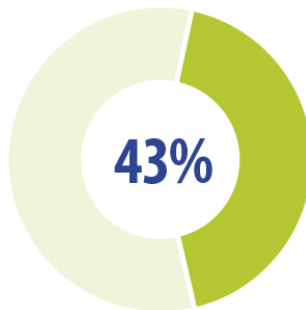
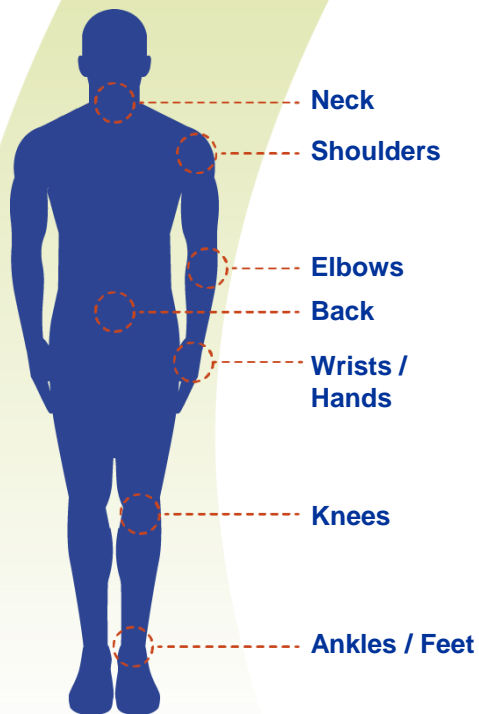
Tingling



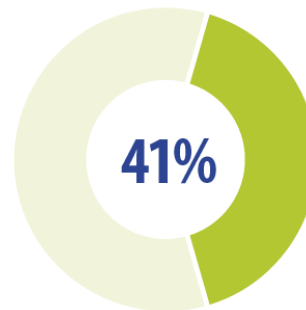
Swelling

■ Caused or aggravated primarily by work and by the effects of the immediate environment in which work is carried out

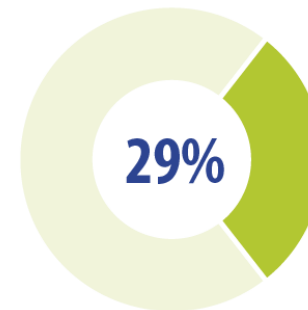
Parts of the body typically affected



Back



Upper limbs



Lower limbs

MSD risk factors

- **Different groups of factors can contribute to work-related MSDs, including:**
 - physical and biomechanical
 - organisational and psychosocial
 - individual factors
- **These factors may act independently or in combination.**



Physical (also known as biomechanical) factors



- **Work postures and movements can be harmful as a result of repetition, duration or effort. For instance:**
 - heavy physical work (forceful exertion)
 - heavy lifting
 - repetitive movements
 - awkward postures
 - prolonged work tasks
 - prolonged sitting or standing
 - work tasks that have to be performed repeatedly or with great precision.



- **The way work is organised might affect how burdensome physical work tasks are:**

- number of consecutive working hours
- opportunities for breaks
- the pace of the work and the variation of work tasks
- ...

- **The following factors can also increase the risk of MSDs:**

- lack of control over work tasks or over the pace at which tasks are performed
- lack of support from colleagues or management
- unclear / conflicting roles
- ...

Individual factors



- **Workers' characteristics can also be MSD risk factors (if risks aren't managed properly):**
 - age
 - gender
 - height
 - arm length
 - condition of health (if they already suffer from an MSD or have done so in the past)
 - lack of knowledge of work techniques and safety procedures
 - ...



Risk assessment

- In order to prevent MSDs, a workplace risk assessment has to be carried out with the purpose of identifying the risks and trying to remove them.
- Everyone — employers, managers, workers and OSH services — should participate



Tackling MSDs

- **MSDs are preventable and manageable**
- **When discussing and agreeing on actions to address MSD risks, it is important to follow the general principles of prevention.**



General principles (hierarchy) of prevention 1

▪ Avoid the risks

- automate lifting and transport operations

▪ Combat risks at their source

- reduce the height that loads needs to be lifted to

▪ Adapt the work to the individual

- design the workplace to provide enough room for workers to adopt the correct postures
- choose adjustable chairs and desks (that allow workers to alternate between sitting and standing)
- allow breaks and variation in how tasks are performed



General principles (hierarchy) of prevention 2

- **Adapt to technological progress:**
 - keep up to date with new assistive devices and more ergonomic devices, tools and equipment
- **Replace the risky with the safe or less risky**
 - replace manual handling of (heavy) loads with mechanical handling
- **Develop a coherent policy that covers technology, work organisation, working conditions, social relationships and work environment**



Assistive devices



Workplace design



Ergonomic devices /
tools / equipment

General principles (hierarchy) of prevention 3

■ Implement collective measures first:

- Prioritise good-grip handles over anti-slip gloves, smaller loads per lift over back belts (lumbar support)

■ Provide good training and instructions for workers:

- Provide practical training on the correct use of work equipment (lifting devices, chairs, furniture) and safe working postures (sitting, standing).



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