

HELP SHEET FOR TEACHERS

Be Body Wise with Napo: Lesson Two – Back

In this lesson plan ONLY some health effects on certain parts of the body are mentioned. Many other impacts on the body can happen and will be raised in future lesson plans.

Napo in... Lighten the load!

Musculoskeletal disorders (MSDs) are the most common work-related health problem in Europe, affecting millions of workers. At some point in their life as many as 90% of people will suffer from back pain, upper limb disorders, and repetitive strain injuries.

'Lighten the load' supports an integrated management approach to tackling MSDs, and the need to address the 'whole load on the body', which covers all the stresses and strains, environmental factors such as cold working conditions, the pace at which the work is being carried out, and the load being moved.

The film shows Napo confronting different work situations. There are eleven scenes showing typical situations faced in the workplace.

What are MSDs?

Work-related musculoskeletal disorders are impairments of bodily structures such as muscles, joints, tendons, ligaments, nerves, bones and the localised blood circulation system, that are caused or aggravated primarily by work and by the effects of the immediate environment in which work is carried out.

Most work-related MSDs are cumulative disorders, resulting from repeated exposure to high or low intensity loads over a long period of time. However, MSDs can also be acute traumas, such as fractures, that occur during an accident.

These disorders mainly affect the back, neck, shoulders and upper limbs, but can also affect the lower limbs. Some MSDs, such as carpal tunnel syndrome in the wrist, are specific because of their well-defined signs and symptoms. Others are nonspecific because only pain or discomfort exists without evidence of a clear specific disorder.



What are we talking about?

Back pain can arise in many work situations, but is more common in tasks that involve:

- Heavy manual labour, and handling tasks in heavy industry
- Manual handling in awkward places, like delivery work
- Repetitive tasks, such as manual packing of goods
- Sitting at a workstation for a long period of time if the workstation is not correctly arranged or adjusted to fit the person, e.g. working with computers
- Driving long distances or driving over rough ground, particularly if the seat is not properly adjusted; operating heavy equipment can lead to excessive jolting and jarring

Manual handling can create back problems; the risk of damage is higher if the load is:

- Heavy
- Carried too far from the body
- Not easy to handle (too big, awkward shape or difficult to grasp)
- Too high or too low (e.g. when the load is overhead)

Additionally, damage can occur if:

- The back is bent during lifting or manual handling, e.g. to lift the load
- The body twists during lifting or manual handling
- The right equipment (manual or mechanical) is not used

Associated risks connected include:

- Slipping - the load is large and visibility is obscured
- Slipping/tripping - the floor is slippery or damaged, and footwear is not appropriate
- The trolley is over-loaded and causes an accident (packages can fall and injure people)
- The trolley is on a slope, sliding or slipping out of control

The risk is higher if:

- The movement is always the same
- The speed of the movements increases
- The movement also implies an effort
- The movement is done with an incorrect arm position
- The pauses are inadequate
- The length of the repetitive work increases



Physical activities that can aggravate back pain include:

- Stooping, bending over or crouching, including work at PCs (poor posture)
- Lifting objects which are too heavy or bulky; carrying objects awkwardly
- Pushing, pulling or dragging excessive loads
- Working beyond normal abilities and limits, and when physically overtired
- Using poor lifting techniques
- Stretching, twisting and reaching
- Prolonged periods in one position, leading to postural strain
- Situations where the whole body is subjected to vibration, jolting and jarring

How to tackle MSDs?

If you can't avoid MSDs, prevent them by evaluating the risks which cannot be avoided:

- Tackle the risks at source
- Adapt the work to the individual
- Adapt to changing technology
- Replace what is dangerous with what is safe or less dangerous
- Develop a coherent overall prevention policy, addressing the whole load on the body
- Give collective protective measures priority over individual protective measures
- Give appropriate instruction to workers

European legislation

The main components of MSD prevention are recognised in EU directives, Member States' regulations and good practice guidance. Directives are supplemented by European standards (EN standards), which enable the directives to be implemented.

Good practice

- If a load must be lifted from the floor, bend the knees, bring the load close to the body and lift it while standing up
- If a load is lifted from a front position to a back position, do not twist the back but turn all the body using the legs
- If the load has to be put on a high scaffold, do not bend backwards but use a proper and safe lifting device
- If the load is too heavy to lift, ask for help!



The first lesson of Be Body Wise with Napo introduces risks to the skin.