



Mining & Quarrying
OCCUPATIONAL HEALTH &
SAFETY COMMITTEE

Introduction to Manual Handling



Smart
Moves

Introduction

The Smart Moves fact sheets are designed to provide basic solutions for common and hazardous tasks within the industry.

Manual Handling related injuries are one of the most significant issues to industry in terms of frequency, severity and cost.

Manual Handling means “an activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain a person, animal or thing”. (Occupational Health, Safety & Welfare Regulations, 1995).

In terms of the Mining and Quarrying Industry, manual handling can represent a broad range of activities. Consultation with the industry has identified a series of tasks which have been known to contribute to the risk of manual handling related injuries. This list includes:

- Shovelling.
- Getting into and out of vehicles.
- Lifting rocks.
- Working in mechanical workshops.
- Lifting items into and out of vehicles (eg. utes, 4 wheel drives and trailers).



Figure 1: *Poor manual handling technique. Bending and twisting spine and poor use of legs during lifting.*

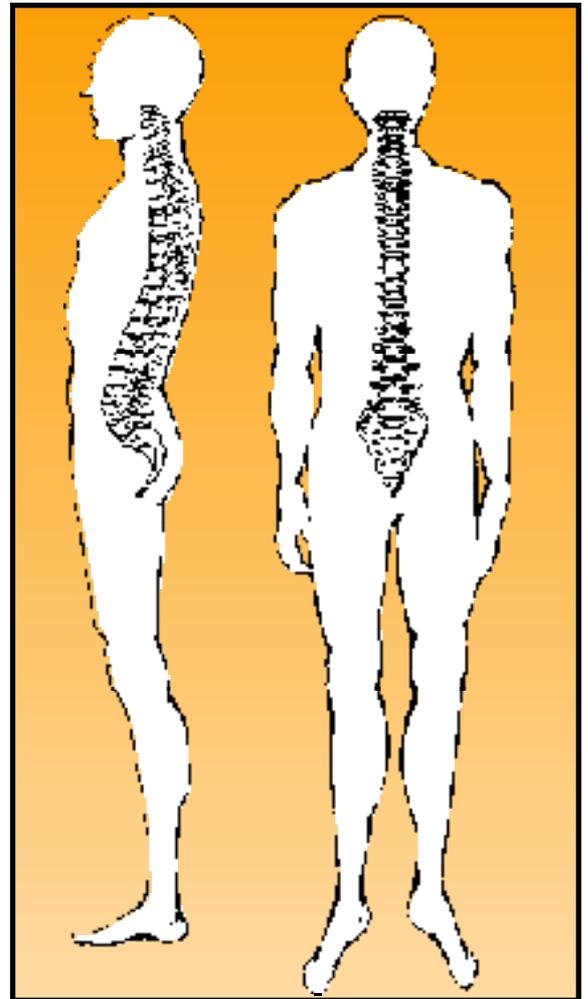


Figure 2: *The human spine.*

Assessment of Manual Handling Hazards

The Occupational, Health, Safety and Welfare Regulations (1995) state that “An employer must ensure that any manual handling that is likely to be a risk to health and safety is identified and assessed and the employer must take such steps as are reasonably practicable to control the risk” (page 89-90).

The Occupational Health, Safety and Welfare Act (1986) and Manual Handling Code of Practice (1990) reminds us that Health and Safety is every bodies concern and responsibility.

MAQOHSC is available to provide free assistance to the members of the industry in relation to manual handling and other occupational health and safety issues.

Manual Handling Posture and the Spine

It is possible for people to work in poor postural positions for a short period of time without feeling any immediate discomfort. Consequently they feel that they are not doing themselves any harm. In many cases nothing could be further from the truth. Repetitive bending and/or twisting of the spine (refer to figure 1), even with minimal weight applied, can cause wear and tear on the various “components” that make up the structure of the spine.

Back injury can result from a single overloading event or from a long process of wear and tear on various spinal structures.

Because of the length of the human spine and the way it is constructed, any bending forward or sideways creates a lever effect on the spine where the weight to be lifted is hung off the long end of the lever, (the wrong end)! This applies increased pressure to the front edge of the discs and over stresses the back edge. This may cause damage to the discs. They may bulge or even rupture. Because the discs are attached to vertebrae, twisting whilst bending increases this problem.

Because of the proximity of the discs to the spinal cord even minor bulging of the discs can cause pain and take a while to go in the short term. On the other hand it is quite common for a person to feel no pain but the accumulated damage over time may result in a major injury triggered by a minor activity.

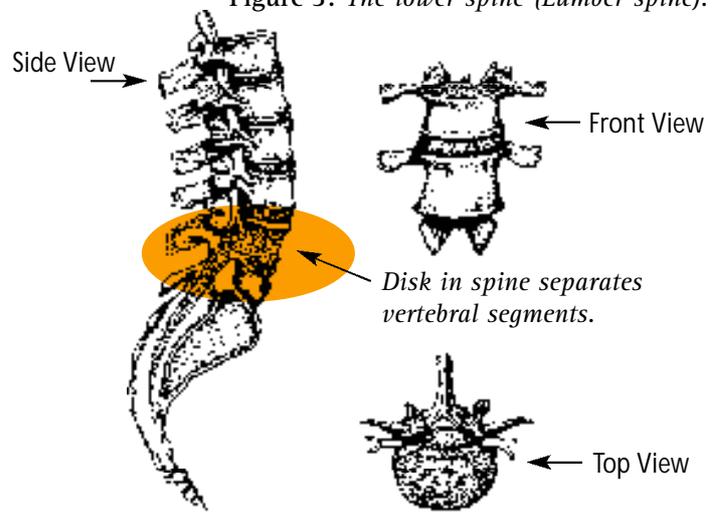
Posture is a significant factor and it is important to keep the spine as straight within its “natural curvature” as possible. (Refer to figure 4).

Lifting pushing or pulling with a bent back, sitting “slumped” in a chair or operating seat of a piece of mobile equipment, (particularly whilst travelling over uneven ground) can cause damage to the spine. Twisting while carrying out these activities with a bent spine will make the problem worse.

Further information

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Figure 3: The lower spine (Lumber spine).



Summary

This “fact” sheet has provided the following basic information in relation to the introduction to manual handling in the Mining and Quarrying Industry:

- A definition of manual handling.
- Background information on the development of the Smart Moves Manual Handling program.
- List of “fact” sheets available in this Smart Moves series.
- Legislative responsibilities for manual handling and auditing in the workplace.
- Reference for FREE assistance with this from MAQOHSC.
- A summary of the main forms of manual handling injury with a focus on “back” injuries

For further information on good working postures refer to:

- Guidelines for Vehicle Seating
- Vehicle Entry & Exit Methods
- Shovel Design & Uses
- Stretching Exercises

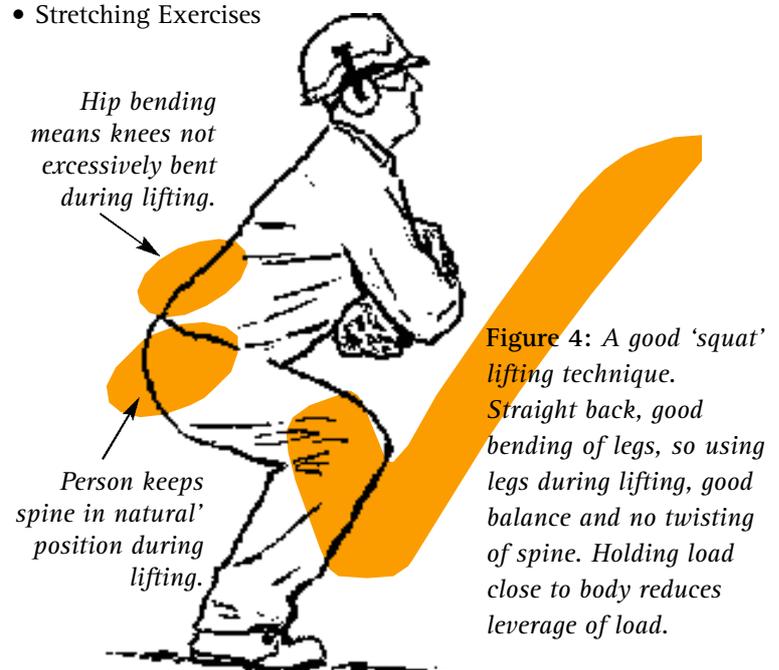


Figure 4: A good ‘squat’ lifting technique. Straight back, good bending of legs, so using legs during lifting, good balance and no twisting of spine. Holding load close to body reduces leverage of load.