No. 10, May 2000

Manual Handling Risk Assessment for Employers

Thousands of workers suffer painful injuries while performing manual work. Most manual handling injuries result in back pain or injury. A manual handling injury may occur suddenly or develop gradually over years. The cost of a manual handling injury is enormous in human, financial, and social terms to the employee, the employer, and the community.

The 3 most important components in reducing manual handling injuries are:

1. Design of plant, equipment and work practices.
2. Assessment of manual handling jobs tasks.
3. Control of risk.

Design

As far as possible, before a new machine or piece of equipment is bought, ensure that it is free from manual handling risks; that it is able to be used without causing physical stress to the user. This is also true of systems of work. When planning how work is to be carried out, ensure that it is free from manual handling risks.

Assessing the Risk

Any risk assessment and control of a manual handling risk must be done in consultation with the employees who perform the task. The factors you must consider in the assessment are:

The Weight

A lighter load means a lesser risk of injury. The weight of the objects handled must be within the capacity of the operator to handle safely. However, the weight of the load must be considered with other factors that affect the load.

The Type of Handling

It is usually easier to pull or push a load than to lift, put down, or carry it. Unnecessary handling increases tiredness of the employee and increases the chance of injury.

Position of the Load

There is much less force on the spine if the load is held in front and comfortably close to the body when lifting. Twisting and side bending, especially when lifting, puts more force on the spine and increases risk of injury, even for light loads.

The Frequency, Distance and Time

The more you handle a load, the more tired your muscles and bone structure become, making it easier for injuries to happen.

The Terrain

Rough ground, steep slopes, slippery and uneven floors, stairs and cluttered floors make moving loads awkward and increase the chance of injury.

The Climate

If it is too hot, too humid or too cold, both comfort and the capacity to work well are reduced. Make sure employees wear comfortable clothing and shoes that grip well.

Lighting

Is there adequate lighting? Obviously, if the employee cannot see clearly, the risk of accidents increases.

Skill and Experience of Employee

Workers should have the skill and experience to perform the job safely.

Duration and Frequency of Activity

Where the job involves repetitive movements, the time spent on handling should be reduced and greater care taken to ensure the movements are not causing unnecessary strain.

Forces Applied

Forces should be applied smoothly, evenly and close to the body. Forces exerted should be well within the capacity of the operator, and should not be applied with poor posture.

Nature of the Load

If the load is compact, stable, easy to grip and can be held close to the body, it is much easier to handle. Live loads are more difficult to work with and require consideration as to the safest way to handle the task.

Condition of the Workplace

Working conditions should be safe and comfortable, with adequate space to perform the task. Tools, plant and equipment should be well maintained.

Work Organisation

If the workflow is even and there are adequate numbers of workers for the work, it reduces the risk of injury.

Age/Gender

Young employees and older workers may be at increased risk of injury from manual handling activities. Women are three times more likely than men to suffer injury because they are smaller in frame and grip.

Layout of the Workplace

There should be adequate room to perform the manual handling task safely. That is, the workspace available should not be too cramped. In general, working levels should be waist high and tools, plant and equipment should be placed in front and within easy reach of the worker.

Control of Risk

When a manual handling task is assessed as a risk, the first control option to be considered is redesign. The best control is for a task to be redesigned so that the risk is completely eliminated. If this is not possible, reducing the risk should be the aim, and the task redesigned with this in mind.

Mechanical aids and training are also options.

Mechanical Aids

These can be trolleys, hand trucks, wheelbarrows or conveyors – any aids to assist in handling difficult or heavy objects, e.g. use custom-made trolleys to avoid carrying tools. Mechanical aids should be properly maintained and workers should be trained to use them correctly.

Training

Proper training should be provided to any employee carrying out manual handling tasks.

If it is not possible to control the risks involved in one person lifting and moving heavy, large or awkward objects, a team lift may be organised. Team lifting reduces the risk of injury, reduces fatigue and makes the task much easier.