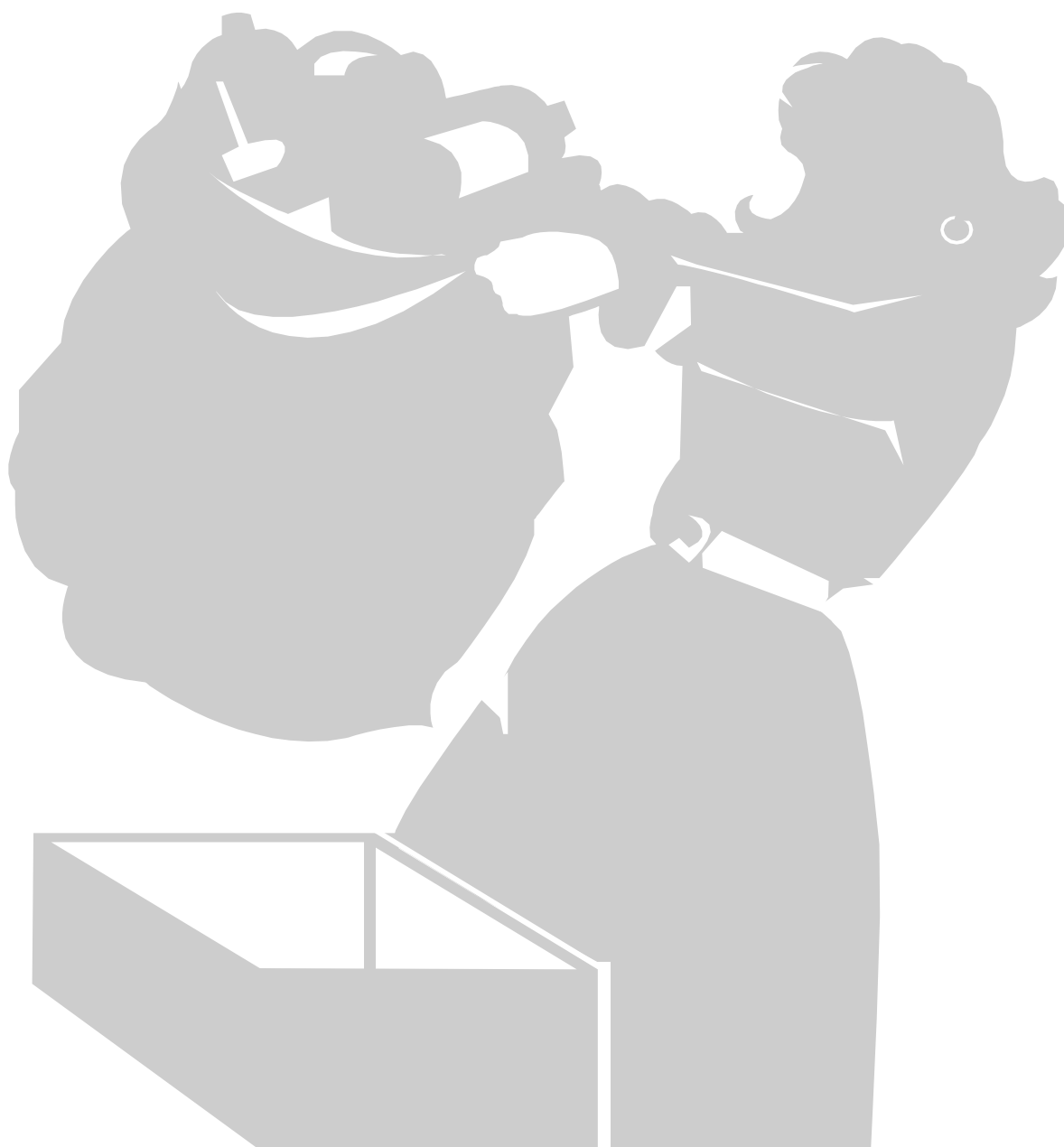


MANAGING MANUAL HANDLING

A Guide for Managers and Heads of Departments



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INTRODUCTION

Manual handling operations currently account for approximately 35 % percent of all reported industrial accidents. Common types of injuries such as hernias and prolapsed discs can cause considerable pain, permanent disability and in some cases loss of experienced and valuable staff. Although such accidents and injuries will never be completely eliminated manual-handling tasks can be managed in order to reduce the likelihood of accidents.

REGULATION

The Management of Health and Safety at Work Regulations require an assessment of all risks to employees, if this general assessment indicates the possibility of a risk from the manual handling of loads then the requirements of the Manual Handling Operations Regulations should be followed.

WHAT IS MANUAL HANDLING?

The regulations apply to the manual handling of loads by human effort as opposed to mechanical handling by crane, lift truck etc. Introducing mechanical assistance may reduce but not eliminate manual handling since human effort is still required to move, steady or position the load.

RESPONSIBILITIES

The responsibility for reducing the risk of injury from manual handling operations rests with the University and is met by 'Key' Senior Staff and their respective Heads of Departments.

The strategy which departments should adopt is:

- a)** Identify manual handling operations, which involve a risk of injury.
- b)** Carry out a risk assessment of the activity. This should detail the task and the risk reduction methods to be employed, in order of preference: eliminate the task, automate or mechanise the activity, modify the activity and where appropriate provide training and information to handlers.
- c)** Periodically review manual handling operations to ensure that developments and changes in the working environment can be accommodated.

STRATEGY

Departments which identify that they undertake operations which involve risk of injury should appoint an assessor or incorporate manual handling assessment into their existing safety management system. Identification and assessment of manual

handling tasks must be undertaken by a competent person trained in the techniques of manual handling. Such a body should have an understanding of: the requirements of the regulations as detailed above, the extent and nature of manual handling tasks within the department, human capabilities, how to identify high risk activities and practical steps to achieve risk reduction. It is likely that training in techniques of manual handling will be required for many activities, if this is the case an appropriate training exercise should be selected from the training resources listed below. Heads of Department will wish to oversee assessments since they have responsibility for them.

TRAINING AND SUPPORT MATERIALS

Video - Lifting and carrying (15 mins)

Booklet on techniques of manual handling

Human kinetics training course for handlers (2hrs)

Please approach The University Health and Safety Adviser for further details of these training and support materials.

A GUIDE TO MANUAL HANDLING RISKASSESSMENT AND RISK REDUCTION

1) What is manual handling

1.1) Manual handling is the handling of loads by human effort as opposed to mechanical handling by crane, lift truck etc. Mechanical assistance may reduce but not eliminate manual handling since human effort is still required to move, steady or position the load.

2) Why risk assessment

2.1) Once hazardous manual handling tasks have been identified then in order to manage them there needs to be an assessment which identifies and evaluates the significant risk factors and specifies the measures necessary to eliminate or reduce risks.

2.2) A good risk assessment will consider the task, the environment, the load and the individual handler's capability.

2.3) The object of the risk assessment (in order of preference) is to eliminate activity to reduce risk and to provide training and information where appropriate.

3) Skills and knowledge required for assessment

3.1) The person or group undertaking the assessment should have an understanding of: the requirements of the regulations as detailed above.

3.2) The nature and extent of handling operations within the department, human capabilities, identification of high risk factors and practical steps which can be taken to reduce risk.

4) How detailed should an assessment be ?

4.1) Where a general assessment under the Management of Health and Safety at Work Regulations indicates the possibility of injury consideration should be first be given to avoiding the need for the operations in question.

4.2) A detailed recorded assessment of every operation could be a major undertaking and involve wasted effort, it is not appropriate if the operations are easily avoided or if the risk is clearly of a low order.

4.3) A judgement should be made as to the nature (minor or severe) and likelihood of injury. Appendix 1 provides some simple numerical guidelines to assist with this initial judgement.

4.4) Those operations falling outside the guideline limits require more detailed assessment.

4.5) Generic assessments which draw together common threads from a range of similar activities are quite acceptable.

4.6) Assessments should identify in broad terms the problems likely to arise during the kinds of operations that can be foreseen and the measures which will be necessary to deal with them. In the case of delivery operations for example a useful technique is to list the various types of task, load and working environment concerned and then to review a selection of them. The aim is to establish the range of risks to which people are exposed and then to decide on preventive steps.

5) Making an assessment

5.1) When making an assessment it should follow the structure set out in the guidance five steps to risk assessments published by the HSE

- | | |
|--------|---|
| Step 1 | Look for the hazard. |
| Step 2 | Decide who might be harmed and how. |
| Step 3 | Evaluate the risk and decide if existing precautions are adequate or whether more should be done. |
| Step 4 | Record your findings. |
| Step 5 | Review your assessments and revise it if necessary. |

6) Practical risk reduction:

Your risk assessment will have identified the main risk factors and it is these which you must attend to to reduce the risk of injury. When considering reducing risk one must bear in mind the cost of any change, where the cost of a change greatly outweighs the risk involved then such a change is not appropriate.

Where routine manual handling operations are carried out for example in a production type environment then changes to the task and the working environment are likely to be appropriate. Where operations are carried out in a changing environment more interest should focus on the load - for example can it be made easier to handle?

Mechanical assistance (where appropriate) involves the use of handling aids. There are many examples. A lever may remove hands from a trapping area and reduce the force required to move the load. A sack truck, trolley or roller conveyor may reduce the force required to move loads horizontally. A hoist can take the weight of a load leaving the operator free to position it. Hooks, handles, webbing or suction pads can simplify handling a load which is difficult to grasp.

The task: The optimum storage and moving height for loads is at waist height, storage much above or below this height should be reserved for loads which are lighter or more easily handled, or loads which are handled infrequently. Also changes to the task layout, the equipment used or the sequence of operations can reduce the need for stooping, twisting and stretching.

The load: Consideration should be given to reducing a loads weight, can the department specify lower package weights or smaller package containers? If a great variety of weights is to be handled then can they be sorted into weight categories? Can loads be made less bulky so that they are easier to grasp and held close to the body?

Alternatively handles, indents, slings or other carrying devices may also make-loads easier to grasp. Packaging may stabilise a load which lacks rigidity and prevent it from shifting unexpectedly. Ideally containers holding liquids or powders should be well filled leaving only a small amount of free space. Loads which are hot or cold or which have jagged or sharp edges may require an insulated container or the use of gloves to prevent injury.

The working environment: The provision of sufficient clear floor space and the avoidance of restrictive doorways, fixtures or machines should be achieved where possible. Floor condition should be flat and well maintained and clear of spillages or obstructions. Where floors are liable to become wet attention should be given to the provision of slip resistant flooring. Make sure you know where you are going to set down the item being transported and that the area is clear of obstructions.

Transition of a load from one level to another should be made ideally by means of an elevator or a gentle slope or failing that by well maintained and well positioned steps. Extremes of temperature, excessive humidity and poor ventilation should be avoided where possible either by improving environmental control or by relocating the work.

Lighting should be sufficient to allow handlers to see what they are doing and judge distance and position.

The individual: Particular consideration should be given to handlers who are or recently have been pregnant or have had a back or hernia injury or other such injury which affects their capability. An individual's general state of health and fitness does affect their capability however reliable selection of individuals for handling tasks using

such criteria is not possible. It is generally recognised that a degree of self selection should be catered for in physically demanding tasks. Unaccustomed exertion for example on starting a new job or returning from absence or holiday can carry a significant risk of injury. Training courses and materials for handlers are available and can reduce the risk of injury, however the primary objective should always be to optimise the design of the task.

APPENDIX 1

NUMERICAL GUIDELINES FOR ASSESSMENT

The guideline figures are not weight limits, they are intended as an initial filter to identify those operations requiring a detailed assessment. Guideline figures may be exceeded however where they are exceeded by a factor of two the task should come under very close scrutiny. There is a wide range of individual capability in the working population. The guideline figures are appropriate for nearly all men and over half of women. Reduce the guidelines by one third to make them appropriate for nearly all-working women.

Lifting and lowering:

These guidelines assume that the handler has a stable body position, the load is readily grasped with both hands and the operation takes place in reasonable working conditions.

Twisting:

The basic guidelines for lifting and lowering should be reduced if the handler twists to the side during the operation. Figures should be reduced by 10% where the handler twists through 45 degrees and by 20% where the handler twists through 90 degrees.

Frequency of lifting and lowering:

The basic guidelines for lifting and lowering are for relatively infrequent operations (up to 30 operations per hour). They should be reduced by 30% where the operation is performed once or twice per minute, by 50% where the operation is repeated five to eight times per minute and by 80% where the operation is repeated 12 times per minute.

Carrying:

Basic guidelines for carrying are the same as for lifting and lowering although it is assumed that loads are not normally carried below knuckle height. The load should be carried close to the body and no more than 10m without a rest otherwise the guideline figures should be reduced. If loads can be carried securely on the shoulder without first having to be lifted a more detailed assessment may show that it is permissible to exceed the guideline figure.

Pushing and pulling:

Where force is applied between knuckle and shoulder height the guideline figure for stopping or starting the load is 25kg. The guideline figure for keeping the load in motion is 10kg.

Handling whilst seated:

This guideline figure applies only when the hands are in the box zone. If handling beyond the zone is unavoidable or twisting is involved then a more detailed assessment should be made.

For further information please consult HSE publication "Getting to Grips with Manual Handling" a short guide, available from the Health and Safety Unit ext 3317.