

# MANUAL HANDLING



Health and Safety Guidance Note



**NFU Mutual**  
RISK MANAGEMENT SERVICES

## INTRODUCTION

Manual handling is interpreted as the transporting or supporting of any load (which also includes a person or an animal). It involves a variety of movements, including lifting, lowering, pushing, pulling or carrying.

Incorrect manual handling techniques can cause musculoskeletal disorders (MSDs), most of which are related to the back, although hands, arms and feet are also vulnerable. Manual handling injuries account for over a third of all work-related injuries reported to the Health and Safety Executive (HSE) each year.

## WHAT ARE MY LEGAL RESPONSIBILITIES?

Under the Manual Handling Operations Regulations 1992 (as amended) [Manual Handling Operations Regulations (Northern Ireland) 1992], employers are required to:

- AVOID the need for hazardous manual handling activities, so far as is reasonably practicable (e.g. by redesigning the task to avoid moving the load or by automating or mechanising the process;
- Carry out an assessment if hazardous manual handling tasks cannot be avoided, to determine the level of risk with the operations and take steps to avoid them;
- Reduce the amount of manual handling required, if manual handling cannot be avoided (e.g. by providing mechanical assistance, such as a trolley, pallet truck or hoist).

## HOW CAN I ASSESS THE RISKS FROM MANUAL HANDLING?

A risk assessment is about identifying and taking sensible and proportionate measures to control the risks in your workplace, not about creating huge amounts of paperwork.

You are probably already taking steps to protect your employees, but your risk assessment will help you decide whether you should be doing more. Specific guidance on how to carry out a risk assessment is also provided in the Risk Assessment Guidance Note.

When carrying out your manual handling assessment you need to take into account a range of relevant factors, including the nature of the task, the load, the working environment and individual capability, this requires worker participation.

**THE TASK** – When assessing the task, consideration should be given as to whether it involves any of the following:

- Holding loads away from the body trunk;
- Twisting;
- Stooping;
- Reaching upwards;
- Large vertical movements;
- Long carrying distances;
- Strenuous pushing or pulling;
- Unpredictable movement of loads;
- Repetitive handling;
- Insufficient rest or recovery time;
- A work rate imposed on the worker by a process.

**THE LOAD** – When assessing the load, you need to decide whether or not it is:

- Heavy;
- Bulky/unwieldy;
- Difficult to grasp;
- Unstable/unpredictable;
- Intrinsically harmful (e.g. sharp, hot, etc.).

**THE WORKING ENVIRONMENT** – When assessing the working environment, think about whether or not there are:

- Constraints on posture;
- Poor floors;
- Variations in levels;
- Hot/cold/humid conditions;
- Strong air movements;
- Poor lighting conditions.

**INDIVIDUAL CAPABILITY** – When looking at an individual’s capability determine whether the task requires unusual capability. Does it;

- Present a hazard to those with a health problem;
- Present a hazard to those who are pregnant;
- Call for special information/training.

You should record your significant findings – the hazards, how people might be harmed by them and what you have in place to control the risks.

## GENERAL RISK ASSESSMENT GUIDELINES

The HSE has produced general guidance which states that if you are able to remain within the guidelines, you may not need to carry out a more detailed manual handling assessment.

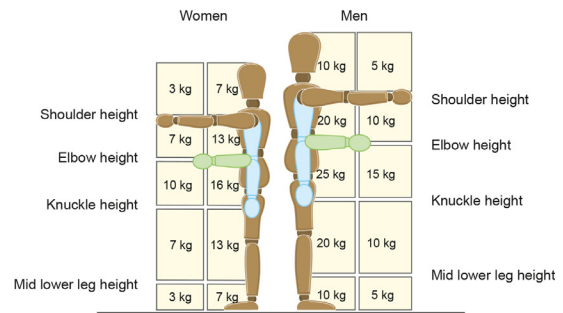
The guideline figures should not be regarded as “safe”, as there set no specific requirements, such as weight limits. However, working within the boundaries of the weights quoted should provide a reasonable level of protection.

Use the diagram below to make a quick and easy assessment. Each box contains a guideline weight for lifting and lowering in that zone. Observe the work activity you are assessing and compare it to the diagram.

First, decide which box or boxes the lifter’s hands pass through when moving the load. Then, assess the maximum weight being handled. If it is less than the figure given in the box, the operation is within the guidelines. If the lifter’s hands enter more than one box during the operation, use the smallest weight. Use an in-between weight if the hands are close to a boundary between boxes.

The guideline weights assume that the load is readily grasped with both hands and that the operation takes place in reasonable working conditions, with the lifter in a stable body position.

## TASKS INVOLVING LIFTING AND LOWERING



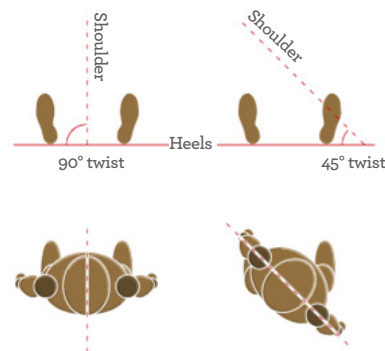
\* (Source HSE)

The basic guideline figures in the above diagram for lifting and lowering are for relatively infrequent operations – up to approximately 30 operations per hour or one lift every two minutes. The guideline figures will have to be reduced if the operation is repeated more often.

As a rough guide, operations carried out:

- Once or twice a minute should have the weight reduced by 30%;
- Five to eight times a minute should have the weight reduced by 50%;
- More than twelve times a minute should have the weight reduced by 80%.

## TASKS INVOLVING TWISTING



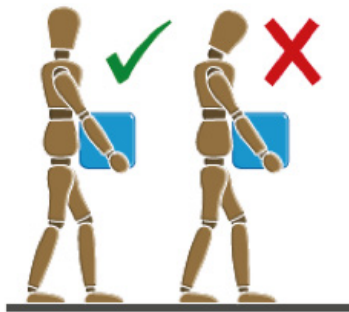
\* (Source HSE)

Manual handling operations will involve some twisting, i.e. moving the upper body while keeping the feet static. The combination of lifting and twisting are particularly stressful on the back. Where the handling involves twisting and turning then a detailed assessment should normally be carried out. However, if the operation is relatively infrequent (up to approximately 30 operations per hour or one lift every two minutes) and there are no other posture problems, then the guideline figures can be used, but with a suitable reduction according to the amount the handler twists during the operation.

As a rough guide:

- Twisting beyond 45° reduce the weight by 10%;
- Twisting beyond 90° reduce the weight by 20%.

## TASKS INVOLVING CARRYING



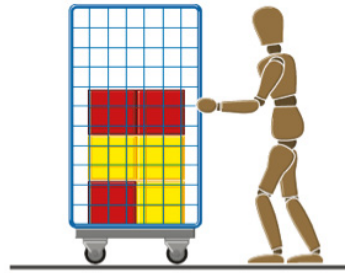
\*(Source HSE)

The guideline figures for lifting and lowering apply to carrying operations where the load is:

- Held against the body with the head kept straight; and
- Carried no further than about 10m without resting.

## TASKS INVOLVING PUSHING AND PULLING

Pushing and pulling of loads is a way to avoid manual lifting and carrying of objects such as by moving the load on a trolley.



\*(Source HSE)

However, when people push and/or pull a load there may be a risk of other musculoskeletal disorders (MSDs), which you need to consider and eliminate or reduce.

The task is within the guidelines if the following figures are not exceeded:

- Force required to stop or start the load is 20kg for men and 15kg for women;
- Sustained force required to keep the load in motion is 10kg for men and 7kg for women.

The guidelines for pushing and pulling operations assume that the force is applied with the hands, between knuckle and shoulder height. They also assume that the distance involved is no more than 20 metres and that there are no extra risk factors like uneven floors or constricted spaces. If these assumptions are not met, a more detailed risk assessment is required.

There is no specific limit to the distance over which the load is pushed or pulled as long as there are adequate opportunities for rest or recovery.

## MANUAL HANDLING TOOLS

The HSE has developed tools to help employers analyse lifting, carrying and team handling (the MAC tool and the V-MAC tool), repetitive upper limb tasks (the ART tool) and pushing and pulling (the RAPP tool). Depending on the task, you may find it helpful to use more than one tool, for example you may need to pick up a box of items (lifting), carry it to a workstation (carrying), then distribute the contents to other locations such as pigeon holes or a filing cabinet (repetitive movements).

For more information about each tool visit the HSE website: [www.hse.gov.uk/msd/manualhandling.htm](http://www.hse.gov.uk/msd/manualhandling.htm)

## HOW CAN I CONTROL THE RISKS FROM MANUAL HANDLING?

There are numerous ways in which you may be able to control the risks from your manual handling tasks, by looking at each of the elements you have reviewed.

The following are some examples of what you may be able to do:

- Using a lifting aid;
- Improve workplace layout to improve efficiency;
- Providing tables or platforms to avoid lifting from floor level or above shoulder height, especially for heavy loads;
- Place the load close to the work area to reduce carrying distances;

- Vary the work, allowing one set of muscles to rest while another is used;
- Split the load to make it lighter or less bulky;
- Asked the supplier to help, e.g. by providing handles or smaller packages?
- Remove obstructions to free movement;
- Provide better flooring;
- Provide routes that avoid steps and steep ramps;
- Improve lighting;
- Ensure your employees' clothing and footwear is suitable for their work;
- Encourage good communication and teamwork.

It is important to involve your workers in any decisions that you make, as they are the ones that know exactly how the tasks are done. Make sure that your solutions are workable for those that carry out the tasks.

## WHEN SHOULD I REVIEW THE ASSESSMENT?

The risk assessment must be reviewed if new information comes to light or if there has been a change in the manual handling operations. The assessment may also need to be reviewed if an injury occurs, or an employee becomes more vulnerable to risk due to illness, disability or pregnancy.

## INFORMATION, INSTRUCTION, TRAINING AND SUPERVISION

Where employees are exposed to the risks from manual handling tasks, you need to provide them with training so that they understand the risks they may be exposed to and also their duties and responsibilities. The information, instruction and training should at least include the following:

- Manual handling risk factors and how injuries can occur;
- How to carry out safe manual handling, including good handling techniques (regular refresher training should also be undertaken);
- Appropriate systems of work for the individual's tasks and environment;
- Use of mechanical aids;
- Practical work to allow the trainer to identify and put right anything the trainee is not doing safely.

It is important that workers are appropriately supervised. Effective supervision can help you monitor the effectiveness of the training that people have received, and whether employees have the necessary competence to do the job

## FURTHER GUIDANCE

- HSE website "Manual Handling" [www.hse.gov.uk/msd/manualhandling.htm](http://www.hse.gov.uk/msd/manualhandling.htm)
- L23 "Manual Handling. Manual Handling Regulations 1992 (as amended), Guidance on Regulations." [www.hse.gov.uk/pubns/priced/l23.pdf](http://www.hse.gov.uk/pubns/priced/l23.pdf)
- INDG143 "Manual Handling. A Brief Guide" [www.hse.gov.uk/pubns/indg143.pdf](http://www.hse.gov.uk/pubns/indg143.pdf)
- INDG383 "Manual Handling Assessment Charts (the MAC tool)" [www.hse.gov.uk/pubns/indg383.pdf](http://www.hse.gov.uk/pubns/indg383.pdf)
- INDG171 Managing upper limb disorders in the workplace: A brief guide for employers [www.hse.gov.uk/pubns/indg171.pdf](http://www.hse.gov.uk/pubns/indg171.pdf)
- INDG398 Making the best use of lifting and handling aids [www.hse.gov.uk/pubns/indg398.pdf](http://www.hse.gov.uk/pubns/indg398.pdf)

These documents are available to download free of charge from [www.hse.gov.uk/pubns/books](http://www.hse.gov.uk/pubns/books)

## MANUAL HANDLING CHECKLIST

The Task		
Can you:	Yes	No
• Use a lifting aid?		
• Improve workplace layout to improve efficiency?		
• Reduce the amount of twisting and stopping?		
• Avoid lifting from floor level or above shoulder height?		
• Avoid repetitive handling?		
• Vary the work, allowing one set of muscles to rest while another is used?		
• Push rather than pull?		
The Load		
Can you make the load:	Yes	No
• Lighter or less bulky?		
• Easier to grip?		
• More stable?		
• Less damaging to hold?		
• Ask your suppliers to help (e.g. smaller packages)?		
The Environment		
Can you:	Yes	No
• Remove obstacles to free movement?		
• Provide better flooring?		
• Avoid steps and spread ramps?		
• Prevent extremes of hot and cold?		
• Improve lighting?		
• Consider less restricting clothing or personal protective equipment?		
The Individual		
Can you:	Yes	No
• Take better care of those who have a physical weakness or are pregnant?		
• Give your employees more information, (e.g. about the range of tasks they are likely to face)?		
• Provide better training?		

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