



Additional Guidance to complete a specific manual handling risk assessment

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Manual handling risk assessments

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Manual handling risk assessments (MH RAs)

Introduction

The main areas of concern regarding manual handling are lifting and carrying, and it is important to avoid stooping and twisting where possible. The activity may also include pushing or pulling, and handling by a group of people (2 or more).

Manual handling, where applicable, should be included as a hazard within the general risk assessment, but sometimes, certain activities will also require a more specific manual handling activity risk assessment.

If women of child-bearing age are employed, the general risk assessment should also identify any manual tasks that may present a hazard for new and expectant mothers.

If the operation is within the guidelines, a further assessment is usually unnecessary unless there are any individual employees who are likely to be more at risk, such as a new or expectant mother, a young person, an individual with health concerns that may be affected by work activities or an existing injury.

Who can carry out these risk assessments?

You do not need to be a health and safety expert to do a risk assessment, however, it is recommended that staff undertaking risk assessments have attended a suitable training course e.g. both a general risk assessment and manual handling risk assessment training course.

People involved in the risk assessment process will need to consider the risks involved in any activity or task and decide what can be done to reduce the risks. Consequently, they will need knowledge of the work area and the types of tasks involved.

When do you need a specific manual handling activity risk assessment?

The HSE has developed the following filters to identify situations where a specific manual handling activity risk assessment is required. For each of the following activities, this must be completed if weights are outside the filter values: (See MH RA form.)

- Lifting and lowering – See Filter 1
- Carrying up to 10 metres– See Filter 1
- Pushing and pulling – See Filter 2
- Handling while seated – See Filter 3

Application of the guidelines will provide a reasonable level of protection to around 95% of working men and women. However, the guidelines should not be regarded as safe weight limits for lifting. There is no threshold below which manual handling operations may be regarded as “safe”. Even operations lying within the boundary mapped out by the guidelines should be avoided or made less demanding, wherever possible.

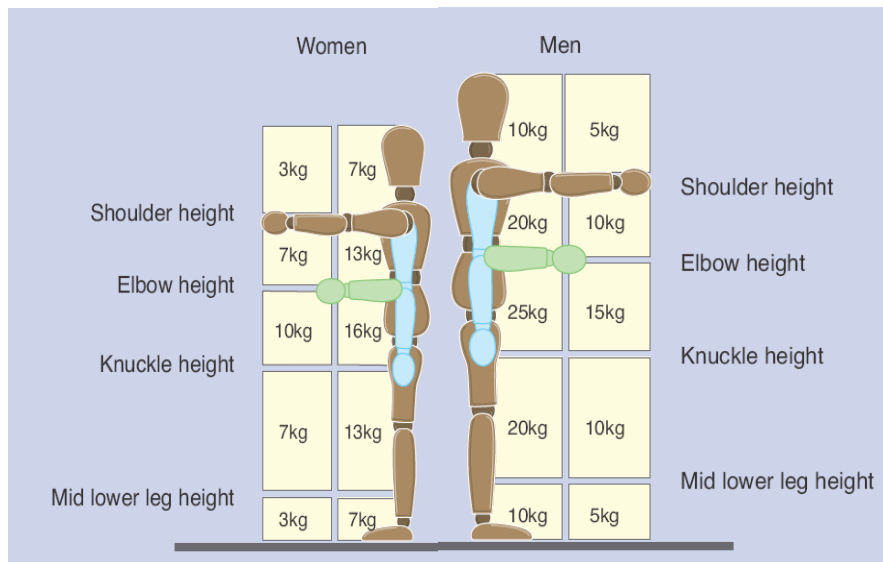
In addition, lifts carried out by a group of people (2 or more) should have a specific MH risk assessment completed.

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Filter 1: HSE Lifting and lowering risk filter

This filter should be used to assess the risks posed by lifting and carrying activities.

Each box in the diagram contains a filter value for lifting and lowering in that zone. The diagram enables the assessor to take into account the vertical and horizontal position of the hands as they move the load.



Source: HSE Manual Handling Operations Regulations 1992: Guidance

Figure 1

The filter values are reduced if handling with arms extended, or at high or low levels, as that is where injuries are most likely.

For example:

The diagram shows 95% of women will be able to safely lift an object weighing 16kg from a shelf at waist height and move it to another shelf at waist height, as long as the load is kept within close reach. If the lifter's hands pass between zones then the lowest weight must be taken, so if she has to lift the load from the floor to waist height and the load weighs more than 7 kg, a detailed manual handling risk assessment for lifting and carrying is required.

But remember, it is preferable to modify the activity so it is within the guidelines, where possible.

These filter values are based on situations where the load is easy to grasp and hold in a good working environment. Where this is not the case, or the activities are complex, a specific manual handling risk assessment should be completed.

HSE Carrying risk filter

The filter weights for lifting and lowering, in Figure 1, apply to carrying operations where the load:

- is held against the body;
- is carried no further than about 10 m without resting;
- does not prevent the person from walking normally;
- does not obstruct the view of the person carrying it;
- does not require the hands to be held below knuckle height or much above elbow height (owing to static loading on the arm muscles).

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Where the load can be carried securely on the shoulder without first having to be lifted (as, for example, when unloading sacks from a vehicle) the filter values can be applied to carrying distances up to 20 m.

If the weight lifted exceeds the filter weight or these assumptions are not met, then a detailed manual handling risk assessment for lifting and carrying is required.

Filter 2: HSE Pushing and pulling filter

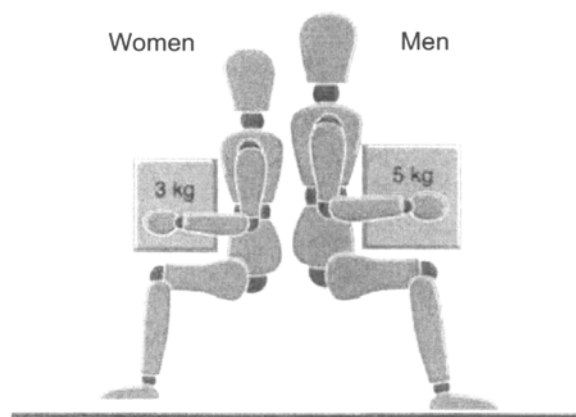
For pushing and pulling (whether the load is slid, rolled or moved on wheels), the task is likely to be low risk if:

- the force is applied with the hands; and
- the torso is largely upright and not twisted; and
- the hands are between hip and shoulder level; and
- the distance involved is no more than about 20 m.

An additional indicator that the task is low risk is if the load can be moved and controlled easily with only one hand.

If these conditions are NOT met, a detailed manual handling risk assessment is required for pushing and pulling. This is also required if the task requires significant forces for pushing and pulling, as indicated by the posture while the operation is being carried out. Also even where the task is within the filter, a more detailed risk assessment will be necessary, if there are risk factors such as slopes, uneven floors, limited workspace or tripping hazards.

Filter 3: HSE Handling while seated filter



Source: HSE Manual Handling Operations Regulations 1992: Guidance

Figure 2

The filter values for handling operations carried out while seated are shown in Figure 2. These values only apply when the hands are within the zone shown. If handling beyond this box zone is unavoidable, a specific manual handling risk assessment is required.

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Factors to consider when assessing the risk

The risk assessor should discuss how lifting and handling is done in the school or service with the staff who carry out those operations.

Some things to consider:

- Can any of the operations either be avoided or made easier and safer? If so how?
- Can a delivery company deliver to the exact destination so staff need not be involved?
- Can arrangements be made with the supplier for regular bulky loads to be delivered in smaller more easily manageable packages?
- Can a trolley be provided? If so the platform should be at a suitable and safe height for receiving the item from the delivery van and for offloading onto shelves, worktop etc. when the destination is reached.
- Can the manual handling activities be interspersed with light duties to allow time for the muscles to recover?
- Can the job rotation be carried out?
- Can two people (or more) be asked to carry out the task so the load is shared and the risks reduced?
- Is the storage area free from obstruction that may cause staff to overstretch, overreach or handle in an awkward position?
- Would it be safer to make several journeys rather than just one?

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Guidance notes for completing a specific manual handling activity risk assessment

This guidance should be used in conjunction with the manual handling risk assessment form.

Task layout

- If the load is held away from the body the amount of stress on the lower back increases.
- Stress on the lower back increases significantly the upper body is twisted whilst lifting.
- Stooping increases the stress on the lower back.
- Reaching upwards places additional stresses on the arms and back.
- Moving the load through a large vertical distance is more demanding than shorter distances. Lifts beginning at floor level or above head height should be avoided, where possible.
- If the load is carried for an excessive distance, e.g. more than 10 metres, physical stresses will be prolonged, leading to fatigue and increased risk of injury.

Working environment

- Constraints on posture: does the working environment involve restricted postures due to a narrow gap between the load and shelves, a high work surface, small store room or area with a lot of equipment and limited free space?
- Poor floors, e.g. uneven, slippery or unstable.
- Variations in levels: where possible always use the lift and/or ramps.
(See also pushing and pulling.)

Pushing and Pulling

Initial forces used to overcome the object's inertia when starting or changing direction are usually higher than the sustained forces used to keep the object moving and should therefore be kept to a minimum. Frequent starting, stopping and manoeuvring should be avoided.

Depending on the design of the trolley it is usually safer to push rather than pull. (The exceptions are trolleys designed to be pulled, including suitcases on wheels. Care should always be taken with these to ensure that they are not too heavy.)

Always ensure that the most suitable route is planned in advance. Points to consider when reducing the risks from pushing and pulling include:

- the length of the route. Is this as short as possible?
- the number of journeys. Would it be safer to make repeated journeys rather than a few demanding ones?
- how demanding the work is;
- whether the route is clear of obstacles, including doorways;
- whether the floor is well-maintained;
- whether an indoor route can be chosen rather than outdoor route;
- whether the task involves negotiating kerbs, steps or slopes and whether ramps are available;

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Protective clothing

The manual handling assessment should take into account whether the task requires the use of personal protective equipment (PPE), and if so, whether it has been provided and if it is suitable for the task. PPE must provide sufficient protection from hazards but should not hinder the lifting process. PPE covers a wide range of items relevant to manual handling, including overalls, gloves, safety shoes, food safety hats and hard hats.

Take care to ensure overalls or uniforms do not restrict movement and prevent people using the correct manual handling techniques. For example, skirts or long overalls over trousers may restrict leg movement. If this is the case a more suitable uniform should be provided, such as trousers with short overall tops.

Gloves may affect dexterity and the ability to grip a load, depending on their type and thickness. Always ensure the correct type of gloves are used to provide protection but also give as much dexterity as possible.

Safety shoes with steel toe caps are also important for some types of manual handling tasks, such as to prevent injury if a load is dropped or if a trolley is wheeled over a foot. Safety shoes should also provide a good grip and are usually covered over to protect against spillages of hot liquids or chemicals. Where safety shoes are not required, it is important that the shoes worn are suitable for the particular task, being flat, having good grip and with toes covered.

Individual capabilities

Everyone is different and some people may be more likely to develop musculoskeletal problems than others. Employees who are likely to be more at risk include:

Staff known to have a history of relevant health problems: e.g. back, knee or hip trouble, or other health problems that could affect their manual handling capability.

Staff with a previous manual handling injury: e.g. hernia or prolapsed disc

Young workers: below the age of 18

New or expectant mothers

They should take special care with moving loads. An individual risk assessment should aim to either

- Remove manual handling from their normal workload
- Reduce the extent of manual handling involved, or
- Alter the way the task is done to minimise manual handling and fatigue.

Hormonal changes can affect the ligaments and bring increasing susceptibility to injury, while postural problems may increase as the pregnancy progresses. Avoiding manual handling activities is particularly important in the early stages of pregnancy and from the 28th week of pregnancy onwards, as well as avoiding long periods of standing or walking.

A risk assessment should be made for expectant mothers when the employee has informed the University of her pregnancy. For more information, and definitions of new or expectant mothers, read the HR policy on health and safety risk assessment for new or expectant mothers.

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Schools and services must ensure they have procedures in place to inform staff of the need to report these conditions as early as possible, to help this risk assessment process. In more complex cases, the University occupational health service will provide additional support where necessary.

Load handled by a group (2 or more)

Handling with 2 or more people may make a lift possible which is beyond the capability of a single person, but it may introduce additional problems which the assessment should consider. During the lift, the proportion of the load that is borne by each team member is likely to vary to some extent, especially over sloping or uneven ground.

Therefore, the load a team can handle safely is less than the sum of the loads individual people can lift alone. As an approximate guide, a two-person team figure is 2/3 of the sum of their guideline individual capabilities, and a three-person team figure is half the sum of their guideline individual capabilities.

Communication between the operatives is essential when lifting as part of a team. The team should have control of the load, lift smoothly and all members should lift and lower together.

Training

Manual handling risk assessments should identify where staff require training in lifting techniques or in the use of specialist equipment. Schools and services must ensure training is provided as soon as possible after the need has been identified. (See MH Training Matrix.)

Other HSE Tools Available

The detailed manual handling risk assessment is adequate, however there are also other HSE tools available to help, where required. These include the Manual Handling Assessment Charts (MAC tool) and the Risk Assessment of Pushing and Pulling (RAPP) tool. See HSE website (<http://www.hse.gov.uk/>) for more details.

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