

'Hot Topics' provide basic guidance on common workplace Health & Safety requirements. They use a simple 'Q&A' approach to convey key messages, but are not intended as an authoritative interpretation of every aspect of the applicable Health & Safety legislation.

1. What is 'manual handling'?

Manual handling is the transporting or supporting of a load, and includes the lifting up, putting down, pushing, pulling, carrying or moving of a load whether directly by hand or bodily force or indirectly by hauling on a rope, pulling on a lever, etc.

A load is a discrete movable object (and includes a person) but is not an implement, tool or machine that is being used for its intended purpose.

When carrying out a manual handling operation there is a risk of receiving an injury, such as a strain, a sprain or other musculoskeletal disorder.

2. Is there any Health & Safety legislation that covers manual handling?

Yes. Manual handling in the workplace is subject to the Manual Handling Operations Regulations 1992 and further guidance is contained in its supporting approved code of practice, L23.

3. What factors influence safe manual handling?

Safe manual handling must be based on a risk assessment, and should consider the following:

- the task, i.e. what manual handling is being undertaken;
- the load, i.e. what is being handled in the task;
- the working environment, i.e. where is the task to be carried out; and
- the individual's capability, i.e. who is undertaking the task.

4. What other factors should be considered when assessing manual handling?

The additional factors to consider in relation to a manual handling task are:

- does the task involve holding the load away from the trunk?
- does the task involve any twisting or bending of the shoulder or trunk?
- does the load have to be carried over an excessive distance?
- does the task involve excessive pushing or pulling?
- is there a risk of a sudden change in the balance of the load?
- is there a sufficient recovery period between lifts?

Where any of these factors are identified as posing a significant risk, it may be necessary to consider automating the task or providing some form of mechanical lifting aid in order to avoid the need for manual handling, i.e. removing the risk of injury.

It should be remembered that when holding a load at arm's length it increases the stress on the lower back more than five-fold, so it is important when undertaking manual handling that the load is held as close to the trunk as possible.

In addition, any twisting of the shoulders or trunk whilst supporting a load can significantly increase upper and lower back stress, so to avoid this action it is important to move the feet when handling a load and not twist the back or bend at the waist.

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If a heavy load, e.g. >15 to 20kg has to be carried for more than 10m, the physical demands increase the risk of injury and it may be appropriate to use a mechanical lifting aid, such as a forklift or pallet truck, to move it.

Having identified a manual handling risk, action should be taken to eliminate or reduce the risk or, if this is not possible, to mitigate the potential consequences by:

- using job rotation to reduce an individual's exposure to the manual handling risk;
- using 'pause gymnastics', i.e. local stretching and movement to reduce fatigue, and breaks to allow for recovery;
- ensuring individuals are properly trained in how to achieve a good lifting posture.

5. What factors should be taken into consideration when assessing the load?

The main factors to consider in relation to assessing the load are:

- how heavy it is, i.e. its physical weight;
- whether it is difficult to hold, grasp or get a secure handhold on;
- whether it is hot or cold which would necessitate the wearing of protective gloves that may reduce grip or dexterity;
- whether it is lopsided or unstable or the contents are likely to move and cause a sudden change in balance, e.g. a liquid in a part-filled container or loose small parts in a box.

There is no specific maximum weight that can be lifted safely but, as a guide, if a load exceeds 20kgs to 25kgs then there is a greater potential risk of a manual handling injury.

Although not necessarily heavy, if a load is large, bulky, smooth or greasy it will require extra grip strength and be harder to control during the lift, and this can significantly increase the risk of injury.

Whenever practical, it is important that loads be correctly marked with their weight to ensure a proper risk assessment can be conducted before any manual handling takes place.

Having identified a manual handling risk, action should be taken to eliminate or reduce the risk or, if this is not possible, to mitigate any potential consequences, including:

- ensuring that loads are not excessively heavy and have suitable grips or handholds;
- ensuring adequate training is given for those involved in manual handling;
- ensuring the area through which the load is to be carried has a clean and slip free floor;
- ensuring that the shortest practical route can be easily followed and is clear of obstructions;
- reducing the height and distance through which a load has to be lifted;

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- where necessary, providing lifting aids, hoists, assistors, powered trucks, conveyors, etc.

6. What environmental factors can affect safe manual handling?

The environmental factors that can affect safe manual handling include:

- there being sufficient space in the workplace to allow a good posture to be adopted before lifting commences;
- there is adequate natural or artificial lighting;
- the working temperature being adequate;
- there are no stairs or slopes that must be used during the lift;
- the floor is clear, non-slippery and free of any obstructions.

7. When considering individuals, what are the factors that influence their ability to undertake safe lifting?

The key factors to consider to help ensuring safe lifting by an individual are:

- does the planned lift require unusual strength, height or reach?; and
- does the planned lift require special instruction, training or knowledge, e.g. the use of a specialised lifting technique?

Safe manual handling can be influenced by factors such as a person's age, sex and general level of fitness. Someone suffering from poor general health will have an increased risk of receiving a manual handling injury.

In addition, special consideration must be given to any manual handling undertaken by a pregnant worker

As a rule, the risk of injury becomes unacceptable if most reasonably fit and healthy individuals cannot perform the manual handling task safely.

8. What other factors can affect safe manual handling?

Other factors to consider in relation to ensuring safe manual handling include:

- whether there is a need to wear personal protective equipment, PPE, that could impede safe manual handling, e.g. the wearing of gloves may reduce grip or dexterity; and
- anything that may affect a person being able to use a good lifting technique, e.g. when the lift needs to be undertaken from a seated or semi-standing position.

9. What is the safe maximum weight that can be lifted?

There is no maximum weight that can be safely lifted but, as a guide, a person should not be required to lift more than 25kg. However, there are several factors that will reduce an individual's ability to lift a load, including:

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- whether the lift involves the need to twist the body or trunk;
- the frequency of the lift, reducing the time for recovery;
- absence of an adequate grip or handhold.

Where two people undertake a joint lift, the maximum safe weight that can be lifted is not simply double that of each individual, but should not exceed one and a half times the normal individual lifting capacity. This is due to the additional risk of something happening during the lift that could result in an extra load being transferred from one individual to the other.

The Health and Safety Executive, HSE, has published recommended maximum weights that an individual should lift, which are set out in the following table:

| For a woman | | Height at which the load is being lifted from | For a man | |
|-------------------------|-----------------------|---|-----------------------|-------------------------|
| Load away from the body | Load next to the body | | Load next to the body | Load away from the body |
| 3kg | 7kg | Above shoulder height. | 10kg | 5kg |
| 7kg | 13kg | Elbow and shoulder height. | 20kg | 10kg |
| 10kg | 16kg | Knuckle to elbow height. | 25kg | 15kg |
| 7kg | 13kg | Mid-lower leg to knuckle height. | 20kg | 10kg |
| 3kg | 7kg | At floor level. | 10kg | 5kg |

The above weights are for guidance only and are based on a normal fit adult who is able to adopt a good and unimpeded lifting technique using a secure handhold on a well-balanced load.

Specific manual handling task must be based on a risk assessment in order to take into account all the factors that can affect it from being safely undertaken.

10. Where can I find out more about manual handling?

The Health and Safety Executive (HSE) has published a leaflet, 'Getting to grips with manual handling', IND(G)143, that provides further guidance on manual handling in the workplace.

A copy of the leaflet can be downloaded free from HSE's website.