Getting to grips with

HSE
Health & Safety Executive

manual handling

A short guide for employers

This booklet explains the problems associated with manual handling and sets out best practice approaches to dealing with it. The advice is intended for managers of small firms or organisations. But many of the general principles are relevant to all organisations whatever their size. It makes sound business sense to have good health and safety practices.

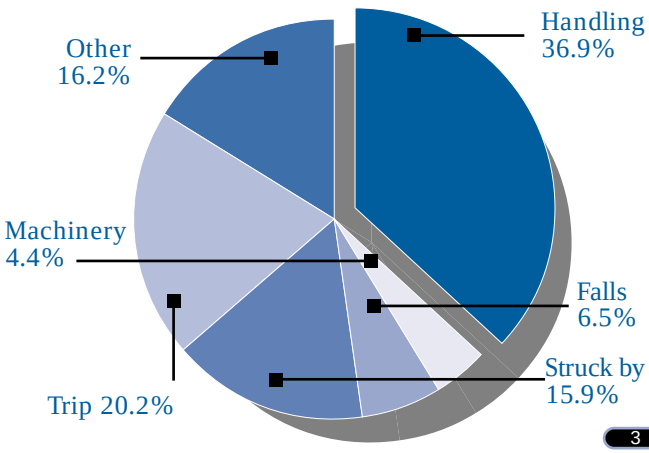
1 What's the problem?

More than a third of all over-three-day injuries reported each year to HSE and local authorities are caused by manual handling - the transporting or supporting of loads by hand or by bodily force.

Most of the reported accidents cause back injury, though hands, arms and feet are also vulnerable. The pie chart shows the pattern for over-three-day injuries reported in 1998/99.

In 1995, an estimated average 11 working days were lost through musculoskeletal disorders affecting the back, caused by work. HSE estimated that such conditions cost employers up to £335 million (1995/96 prices).

Many manual handling injuries build up over a period rather than being caused by a single handling incident. These injuries occur wherever people are at work - on farms and building sites, in factories, offices, warehouses, hospitals, banks, laboratories, and while making deliveries.



2 What should I do about it?

Consider the risks from manual handling to the health and safety of your employees - the rest of this booklet will help. If there are risks, the Manual Handling Operations Regulations 1992 apply.

As well as making good sense, consulting employees on health and safety matters is a legal requirement. If there are safety representatives appointed by trade unions you recognise, the law requires you to consult them. If there are none representing the employees at risk from manual handling, consult the employees themselves or any representative they have elected for health and safety.

3 What are my duties?

The employer should:

- **avoid** the need for hazardous manual handling, as far as reasonably practicable;
- **assess** the risk of injury from any hazardous manual handling that can't be avoided; and
- **reduce** the risk of injury from hazardous manual handling, as far as reasonably practicable.

These points are explained in detail in sections 4 and 5.

Your employees have duties too. They should:

- follow appropriate systems of work laid down for their safety;
- make proper use of equipment provided for their safety;
- co-operate with their employer on health and safety matters;
- inform the employer if they identify hazardous handling activities;
- take care to ensure that their activities do not put others at risk.

4 Avoiding manual handling

Check *whether you need to move it at all.*

For example:

- can wrapping or machining be done without moving the materials?
- can you take the treatment to the patient, not vice versa?
- can raw materials be piped to their point of use?

Consider *automation, particularly* for new processes.

Think *about mechanisation*, like the use of a lift truck.

Beware *of new hazards* from automation or mechanisation.

For example:

- an automated plant still needs cleaning, maintenance etc;
- lift trucks must be suited to the work and have properly trained operators.

5

Assessing and reducing the risk of injury

Who should make the assessment?

The assessment is the employer's responsibility. You should be able to do most assessments in-house; you know your business better than anyone. Most will require just a few minutes' observation to identify ways to make the activity easier and less risky, ie less physically demanding. Advice from outside experts may be helpful in difficult or unusual cases, or to get you started. See the table on pages 6-7 for the kind of problems to look for.

What role can employees play in carrying out assessments?

Your employees can help you carry out the assessment - they often know what problems there are and how best to solve them. If their work is varied or not closely supervised, make sure they are aware what risks to look for when manual handling, and what to do about them. But the final responsibility for assessments rests with employers.

Do assessments need to be recorded?

No, except where it would not be easy to repeat the assessment. In such cases the significant findings should be recorded and kept.

Do I have to do assessments for each individual employee and workplace?

No. It's quite acceptable to do a generic assessment that is common to several employees or to more than one site or type of work.

The important thing is to identify the risk of injury and point the way to practical improvements.

How should I use my assessment?

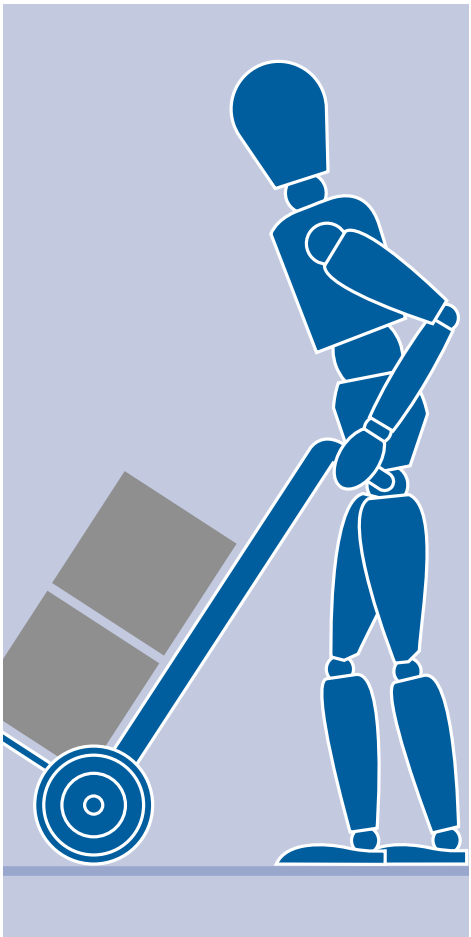
Don't just forget it or file it away. The purpose of the assessment is to pinpoint the worst features of the work - and they're the ones you should try to improve first. See the table on pages 6-7. It is also important to remember to update the assessment when significant changes are made to the workplace.

How far must I reduce the risk?

To the lowest level 'reasonably practicable'. That means reducing the risk until the cost of any further precautions - in time, trouble or money - would be far too great in proportion to the benefits.

Do I have to provide mechanical aids in every case?

It depends whether it's reasonably practicable to do so. If the risks identified in your risk assessment can be reduced or eliminated reasonably by means of mechanical aids, then you should provide them. But you should always consider mechanical aids - they can improve productivity as well as safety. Even something as simple as a sack truck can make a big improvement.



Problems to look for when making an assessment

The tasks, do they involve:

- holding loads away from the body trunk?
- twisting, stooping or reaching upwards?
- large vertical movement?
- long carrying distances?
- strenuous pushing or pulling?
- unpredictable movement of loads?
- repetitive handling?
- insufficient rest or recovery time?
- a work rate imposed by a process?

The loads, are they:

- heavy, bulky or unwieldy?
- difficult to grasp?
- unstable or unpredictable?
- intrinsically harmful, eg sharp or hot?

The working environment, are there:

- constraints on posture?
- poor floors?
- variations in levels?
- hot/cold/humid conditions?
- strong air movements?
- poor lighting conditions?
- restrictions on movement or posture from clothes or personal protective equipment?

Individual capacity, does the job:

- require unusual capability?
- endanger those with a health problem?
- endanger pregnant women?
- call for special information or training?

Ways of reducing the risk of injury

Can you:

- improve workplace layout to improve efficiency?
- reduce the amount of twisting and stooping?
- avoid lifting from floor level or above shoulder height?
- reduce carrying distances?
- avoid repetitive handling?
- vary the work, allowing one set of muscles to rest while another is used?

Can you make the load:

- lighter or less bulky?
- easier to grasp?
- more stable?
- less damaging to hold?

Have you asked your suppliers to help?

Can you:

- remove obstructions to free movement?
- provide better flooring?
- avoid steps and steep ramps?
- prevent extremes of hot and cold?
- improve lighting?
- consider less restrictive clothing or personal protective equipment?

Can you:

- take better care of those who have a physical weakness or are pregnant?
- give your employees more information, eg about the range of tasks they are likely to face?
- provide training (see section 6)?

6 What about training?

Training is important but remember that, on its own, it can't overcome:

- a lack of mechanical aids;
- unsuitable loads;
- bad working conditions.

Training should cover:

- how to recognise harmful manual handling;
- appropriate systems of work;
- use of mechanical aids;
- good handling technique (see section 7).

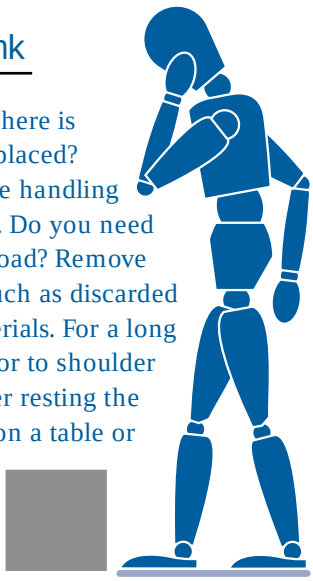
7

Good handling technique

Here are some important points, using a basic lifting operation as an example.

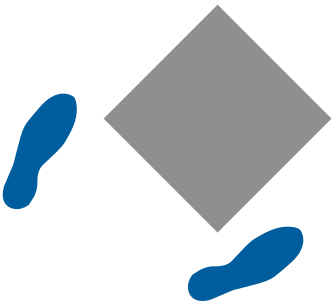
Stop and think

Plan the lift. Where is the load to be placed? Use appropriate handling aids if possible. Do you need help with the load? Remove obstructions such as discarded wrapping materials. For a long lift, such as floor to shoulder height, consider resting the load mid-way on a table or bench to change grip.



Position the feet

Feet apart, giving a balanced and stable base for lifting (tight skirts and unsuitable footwear make this difficult). Leading leg as far forward as is comfortable and if possible, pointing in the direction you intend to go.

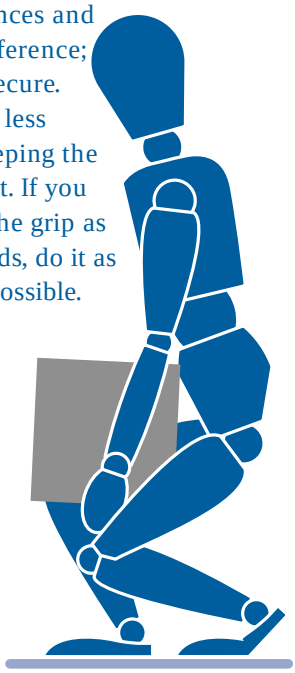


Adopt a good posture

When lifting from a low level, bend the knees. But do not kneel or overflex the knees. Keep the back straight, maintaining its natural curve (tucking in the chin helps). Lean forward a little over the load if necessary to get a good grip. Keep the shoulders level and facing in the same direction as the hips.

Get a firm grip

Try to keep the arms within the boundary formed by the legs. The best position and type of grip depends on the circumstances and individual preference; but must be secure. A hook grip is less tiring than keeping the fingers straight. If you need to vary the grip as the lift proceeds, do it as smoothly as possible.



Keep close to the load

Keep the load close to the trunk for as long as possible. Keep heaviest side of the load next to the trunk. If a close approach to the load is not possible, slide it towards you before trying to lift.

Don't jerk

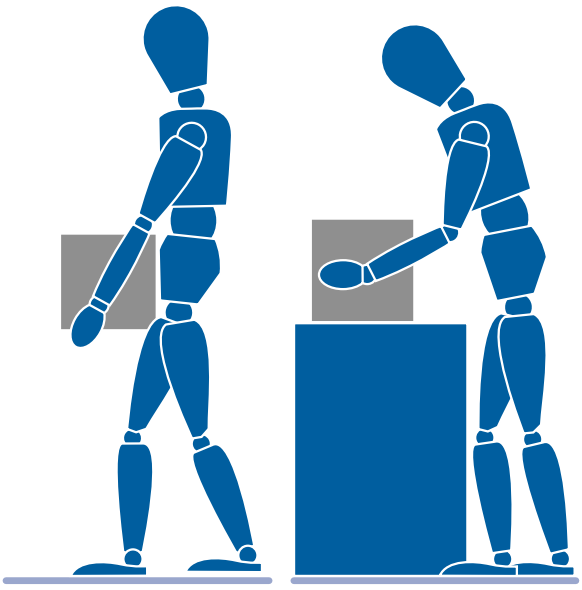
Lift smoothly, raising the chin as the lift begins, keeping control of the load.

Move the feet

Don't twist the trunk when turning to the side.

Put down, *then* adjust

If precise positioning of the load is necessary, put it down first, then slide it into the desired position.



8 How do I know if there's a risk of injury?

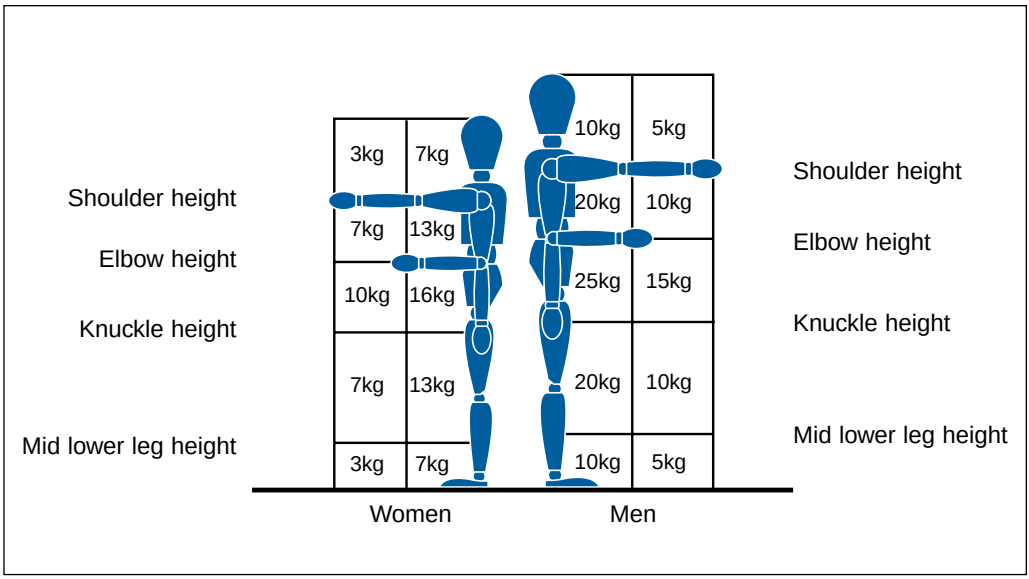
It's a matter of judgment in each case, but there are certain things to look out for, such as people puffing and sweating, excessive fatigue, bad posture, cramped work areas, awkward or heavy loads or a history of back troubles. Operators can often highlight which activities are unpopular, difficult or arduous.

Can you be more definite?

There is no such thing as a completely 'safe' manual handling operation. It's difficult to be precise: so many factors vary between jobs, workplaces and people. But the general risk assessment guidelines filter (see section 9) should help to identify when a more detailed risk assessment is necessary. Working within the guidelines will reduce the need for a more detailed risk assessment.

9

General risk assessment guidelines



- Each box in the diagram above shows guideline weights for lifting and lowering.
- Observe the activity and compare to the diagram. 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. If the operation must take place with the hands beyond the boxes, make a more detailed assessment.
- The weights assume that the load is readily grasped with both hands.
- The operation takes place in reasonable working conditions with the lifter in a stable body position.
- Any operation involving more than twice the guideline weights should be rigorously assessed - even for very fit, well-trained individuals working under favourable conditions.
- There is no such thing as a completely 'safe' manual handling operation. But working within the guidelines will cut the risk and reduce the need for a more detailed assessment.

Twisting

Reduce the guideline weights if the lifter twists to the side during the operation. As a rough guide, reduce them by 10% if the handler twists beyond 45°, and by 20% if the handler twists beyond 90°.

Frequent lifting and lowering

The guideline weights are for infrequent operations - up to about 30 operations per hour - where the pace of work is not forced, adequate pauses to rest or use different muscles are possible, and the load is not supported for any length of time. Reduce the weights if the operation is repeated more often. As a rough guide, reduce the weights by 30% if the operation is repeated five to eight times a minute; and by 80% where the operation is repeated more than 12 times a minute.

Are you saying I mustn't exceed the guidelines?

No. The risk assessment guidelines are not safe limits for lifting. But work outside the guidelines is likely to increase the risk of injury, so you should examine it closely for possible improvements. You should remember that you must make the work less demanding if it's reasonably practicable to do so.

Further information

Manual handling: Solutions you can handle HSG115 1994 HSE Books ISBN 0 7176 0693 7

Manual handling: Guidance on Regulations L23 1998 HSE Books ISBN 0 7176 2415 3

This guidance:

- gives an overview of the Manual Handling Regulations and includes an example of an assessment checklist;
- contains practical advice on measures to reduce the risk of injury;
- gives general guidelines for assessing risk while lifting, carrying, pushing and pulling, and handling while seated.

The Management of Health and Safety at Work Regulations 1992 SI 1992/2051 HMSO ISBN 0 11 025051 6

The Manual Handling Operations Regulations 1992 SI 1992/2793 HMSO ISBN 0 11 025920 3

A pain in your workplace? Ergonomic problems and solutions HSG121 1994 HSE Books ISBN 0 7176 0668 6

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This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

INDG143 (rev1) 7/00 C1000

Printed and published by the Health and Safety Executive.