



Moving and Handling

*Level 1 - All staff
including unpaid and voluntary staff
Core Skills Reader*



Introduction to the Core Skills

The Core Skills standardises the training for 10 subjects commonly delivered as part of statutory and mandatory training requirements for health and social care organisations.

For each subject a set of learning outcomes has been agreed nationally and is set out in the UK Core Skills Training Framework (a copy of the framework is available on the Skills for Health website: www.skillsforhealth.org.uk/).

The learning outcomes specify what needs to be covered in the training for each Core Skills subject. This ensures a quality standard is set and provides clear guidance for organisations to deliver against these requirements as well as recognise the equivalent training delivered externally. This allows for Core Skills training to be portable between organisations and prevents the needless waste and duplication of statutory and mandatory training where it is not required.

To aid organisations in the delivery of the Core Skills subjects, these education resources have been developed to be aligned to the learning outcomes in the UK training framework. Organisations have the flexibility to deliver these resources in a variety of formats as well as adapting them to add localised content alongside the Core Skills Materials.

If you require any further information about the Core Skills, in the first instance please contact the Learning and Development Lead in your organisation. In the North West, the implementation and management of the Core Skills is overseen by the North West Core Skills Programme on behalf of Health Education North West. The programme can be contacted on: CoreSkills.Programme@nhs.net

Introduction to Moving and Handling

This reader covers the learning outcomes for Core Skills Moving and Handling – Level 1. It can be used either as a standalone document or as supporting material alongside the Moving and Handling presentation or e-Learning package (the relevant slide numbers and eLearning pages are given with each sub-heading).

Whichever way the reader is used, it is recommended that the Moving and Handling Assessment is completed afterwards to allow the learner to demonstrate they have retained the knowledge and learning required to support best practice.

This resource has been designed to cover and address the key principles in Moving and Handling. The content covered here for Level 1 is likely to be a minimum requirement for all staff working in a health setting and specific staff groups may require additional training dependent upon their role.

It is anticipated that it will take you approximately 20-30 minutes to complete this reader. Current national guidelines recommend that training for Moving and Handling – Level 1 is repeated as required based on local requirements and risk assessment.

What you will learn in this session

(Slide No 2 / eLearning Page 1)

The objectives covered by this reader are listed below and aligned to the Learning Outcomes for Manual Handling – Level 1 in the UK Core Skills Training Framework.

1. Recognise manual handling risk factors and how injuries occur
2. Employers and employees responsibilities under relevant legislation
3. Responsibility under local organisational policies for Moving and Handling
4. Where additional advice relating to Moving and Handling can be sort
5. Use an ergonomic approach to improve working posture
6. Principles of good back care to promote musculo-skeletal health
7. Principles of safer handling
8. Undertake dynamic risk assessment prior to Moving and Handling tasks
9. How risk management informs safer systems of work
10. Use risk control strategies, resources and support to facilitate good practice

Why is this important?

(Slide No 3 / eLearning Page 2)

Moving and handling activity is a key part of any working day for most employees. More than a third of all reportable injuries of over three days involve manual handling and in health and social care, moving and handling injuries account for 40% of work-related sickness absence. It has a major impact on all workplaces and costs the economy hundreds of millions of pounds every year. Each year around 5000 moving and handling injuries are reported in health services. It costs the NHS £1 billion a year to treat injuries resulting from manual handling related accidents.

Anyone involved in the moving and handling of goods or people could be at risk. Injuries and suffering can result from work involving the handling of loads, even light loads if handled incorrectly. Risks can be found in all work sectors but healthcare, agriculture and construction are recognised as high risk industries due to the number and nature of the manual handling activities involved.

What the law says

(Slide No 4 / eLearning Page 3)

There is a significant amount of legislation and guidance related to moving and handling. The legislation is based on the notion that the prevention of accidents or injury depends on the understanding of the risk factors in a particular work situation.

The relevant legislation covering moving and handling, equipment and risk assessment includes:

- Health and Safety at Work Act 1974
- Manual Handling Operations Regulations 1992
- Management of Health and Safety at Work Regulations 1999
- Workplace (Health, Safety and Welfare Regulations) 1992
- The Provision and Use of Workplace Equipment Regulations 1998
- The Lifting Operation and Lifting Equipment Regulations 1998

The law is there, not to make things difficult but to help, support and protect people in the work place and to assist employers, employees and organisations to understand their responsibilities and operate safely.

Your employer has responsibilities to...

(Slide No 5 / eLearning Page 4)

As well as a general legal responsibility to ensure the health and safety at work of their staff. Employers must also consider the prevention of accidents and work-related ill health such as musculo-skeletal disorders. Employees should be consulted on health and safety matters as it is legal requirement and also because it makes good sense and is good practice.

The employer has a duty to avoid moving and handling activities if there is a risk of injury to its employees. If this cannot be done then they must reduce the risk of injury as far as reasonably practicable. If an employee has complained of discomfort, any changes made to avoid or reduce moving and handling activities must be monitored



to check that the changes are having a positive effect. However, if the changes are not working satisfactorily, other alternatives must be considered.

NHS guidance states employers should:

- Avoid the need for hazardous manual handling, as far as is reasonably practicable
- Assess the risk of injury from any unavoidable hazardous manual handling
- Reduce risks to the lowest level that is reasonably practicable
- Ensure that assessments and action plans are written, and are available to all
- Develop, implement and communicate a policy and local codes of practice relating to manual handling in the workplace
- Employ a competent person such as a back care adviser
- Monitor policy and codes of practice, and take action if they are not properly applied

You have responsibilities to...

(Slide No 7 / eLearning Page 6)

Employees are responsible for their own safety and for the safety of others when carrying out moving and handling activities.

NHS guidance states employees should:

- Follow appropriate systems laid down for their safety
- Be aware of and understand their organisation's manual handling policy
- Make proper use of equipment provided for their safety
- Co-operate with their employer on health and safety matters
- Inform their employer if they identify hazardous handling activities or any dangerous defects in equipment
- Take care to ensure that their activities do not put others at risk

How is moving and handling defined?

(Slide No 8 / eLearning Page 7)

Under the Manual Handling Operations Regulations 1992 moving and handling is defined as:

“...any transporting or supporting of a load (including the lifting, putting down, pushing, pulling, carrying or moving thereof) by hand or bodily force”

MHOR, 1992



The transporting or supporting of a load by one or more members of staff, which includes lifting, putting down, pushing, pulling, carrying or moving, and by reason of its characteristics of unfavourable ergonomic conditions, involves risk, particularly of back injuries to staff.

The spine and back

(Slide No 9 / eLearning Page 8)

The back is particularly vulnerable to injury. Its main components are:

- The spinal cord which is a thick cord of nerve tissue enclosed by the spine this together with the brain forms the central nervous system
- The vertebrae are the bones which act as the building blocks of the spine. They can be damaged by impact injury as with any other bone
- The intervertebral discs are kind of shock absorbers – they are soft fibrous discs with a jelly like centre and are positioned between the vertebrae. They allow the spine to move by cushioning movements between the vertebrae



Back injuries at work can be prevented by understanding what causes them and taking preventative measures to reduce risk when moving and handling loads.

Most common injuries and promoting healthy back care

(Slide No 10 & 11 / eLearning Page 9 & 10)

Musculo-skeletal disorders describe any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back. Common activities that can cause Musculo-skeletal disorders include; holding a static posture, bending, and moving and handling activities on a regular basis particularly when they involve bending or twisting, lifting heavy loads and poor seating posture. Common injuries include:

- Back injuries – trapped nerves, disc injury, strain
- Muscles and tendons – repetitive strain injury
- Ligaments – gristly straps which stretch between bones holding them together and mainly control the direction of motion and limit movement at the end of the normal range
- Tendons – the means by which the muscles are attached to the bones
- Muscles – found in pairs on either side of the spine and provide the main stability for the vertebral column



Ligaments, tendons and muscles can be injured as a result of twisting and stretching, particularly if carried out repetitively. These types of injuries are called soft tissue injuries and tend to be the cause of the majority of reported back injuries. Cumulative strain is when these injuries occur as a result of repetitively carrying out these activities – and is a loss of elasticity in muscle structures.

To prevent these common injuries, there are a number of things that can be done to promote healthy back care. Key activities include:

- Always ensure a good posture
- Try to use a chair with a backrest
Change how you sit every few minutes
- Stay active and exercise
Particularly strengthen abdominal and back muscles
- Maintain a healthy weight
- Quit smoking
- Reduce stress

Ergonomic approach to assessment of risk

(Slide No 12 / eLearning Page 11)

This assessment method is easily remembered by the acronym **TILE**. When assessing manual handling risks you need to look at four specific areas:



- **Task** - does the activity involve twisting, stooping, bending, excessive travel, pushing, pulling or precise positioning of the load, sudden movement, inadequate rest or recovery periods, team handling or seated work?
- **Individual** - does the individual require unusual strength or height for the activity, are they pregnant, disabled or suffering from a health problem. Is specialist knowledge or training required?
- **Load** - is the load heavy, unwieldy, difficult to grasp, sharp, hot, cold, difficult to grip, are the contents likely to move or shift?
- **Environment** - are there space constraints, uneven, slippery or unstable floors, variations in floor levels, extremely hot, cold or humid conditions, poor lighting, poor ventilation, gusty winds, clothing or Personal Protective Equipment that restricts movement?

The Task....

(Slide No 13 / eLearning Page 12)

Before you undertake any moving or handling task you should consider the work area and the work load you are to handle. You can do this by asking yourself the following questions:



- Why am I moving this load?
- Can I avoid the move in some way?
- Is there an alternative?
- How often will I perform this task?
- Where am I going to and from?
- What is the most effective/safest way of fulfilling the task?

Individual capability

(Slide No 14 / eLearning Page 13)

It is important to consider both your own and others, if this is a team situation, physical attributes when thinking through the task. Do you or any other member of the team have any medical or physical characteristics / problems which would affect ability to carry out the task?

- Previous injuries
- Pregnancy
- Differences in height
- How tired are you? (tiredness can affect one's physical and mental ability as well as concentration)



The Load

(Slide No 15 / eLearning Page 14)

You should make a personal assessment of the risk when moving and handling any type of load. You need to assess a number of factors including:

- Is the load Heavy?
- Is it bulky or unwieldy?
- What about the shape?
 - Will this present any difficulties?
- Will it be difficult to grasp?
- Is it unstable or will it shift unpredictably?
- Is it hot or cold?
- Has it any sharp edges?
- Will it be slippery?



The Environment

(Slide No 16 / eLearning Page 15)

People don't often think about the environment they work in. But it is very important that you recognise any hazards that the environment you are operating in has.

You need to consider if there is a lack of space to manoeuvre or are the work surfaces too high or low meaning you will have to stretch or reach.

Uneven or slippery floors are hazardous as are steps and inadequate lighting. Be mindful of any obstructions that may cause you to trip and fall.

The environmental temperature could be a hazard in itself if it is too hot or cold.



Other possible risk factors

(Slide No 17 / eLearning Page 16)

When assessing risk you may also need to consider other factors that may influence your outcome. They may include:

- Previous or existing injuries
- Psycho / social factors
- Availability of equipment
- Use of protective clothing

Principles of Safer Handling

(Slide No 18 / eLearning Page 17)

Be aware of and use the **Principles of Safer Handling** to promote your safety.

- **Stop and Think**
- **Stable Base**
- **Assess the Load**
- **Prepare the Area**
- **Spine in Line**
- **Firm Hold**
- **Hold the Load Close to the Body**
- **Lead with the Head Up**
- **Clear Commands**
- **Move Smoothly**

Assessment leads to a plan

(Slide No 19 / eLearning Page 18)

In any situation where you are expected to move or handle an inanimate object it is important that you stop and take time to think through how you will undertake the task.

You will need to formulate a plan of how to complete the task, minimising any risks to others or yourself. To do this you must ask and answer the questions the **TILE** model proposes.



- STOP**
- THINK**
- SOLVE**

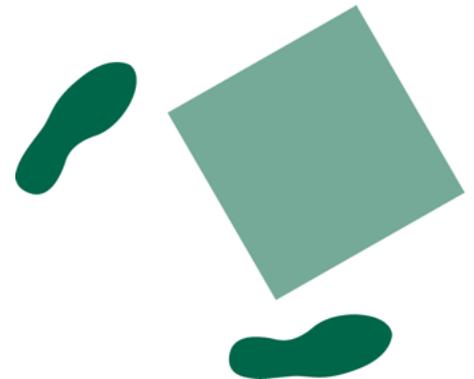
Don't forget the first question you should be asking yourself is, "Do I need to move this load manually? Can I use a handling aid to transport the inanimate load?"

Position your feet correctly

(Slide No 20 / eLearning Page 19)

Adopt a stable position. Place your feet shoulder width apart with one leg slightly forward to maintain balance (alongside the load, if it is on the ground). You should be prepared to move your feet during the lift to maintain your stability. Avoid tight clothing or unsuitable footwear, which may make this difficult.

Remember to wear suitable footwear



Adopt a good posture

(Slide No 21 / eLearning Page 20)

Bend the knees so that the hands when grasping the load are as nearly level with the waist as possible but do not kneel or over-flex the knees. Keep the back straight (tucking in the chin helps). Lean forward a little, over the load if necessary to get a good grip. Keep shoulders level and facing in the same direction as the hips.

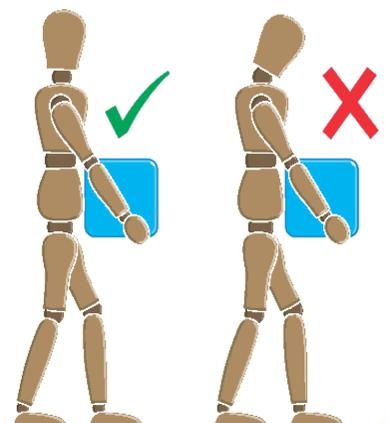


Get a good hold

(Slide No 22 / eLearning Page 21)

Get a firm grip. Try to keep the arms within the boundary formed by the legs. The optimum position and nature of the grip depends on the circumstances and preference, but it must be secure. A hook grip is less fatiguing than keeping the fingers straight. If it is necessary to vary the grip as the lift proceeds, do this as smoothly as possible. A load becomes more difficult to handle if it is held:

- Above the shoulders
- Below your knees
- Away from the body i.e. with arms stretched out.
- **Do you need gloves?**



Use equipment to move objects

(Slide No 23 / eLearning Page 22)

You can reduce your risk of injury by using mechanical handling aids. Equipment such as trolleys, sack trucks and wheelbarrows can be used to move items and if they are used correctly will reduce the likelihood of injury.



More sophisticated manual equipment may be needed in some health care situations. Before you use any piece of equipment your employer should provide training in their proper use and the assessment of risk associated with their use.

Remember it is better to push rather than pull, and to use body weight and leg muscles to do the work. Make sure the load is kept under control, particularly on slopes.

It should be remembered that, although the handling aids will eliminate many manual handling risks, their use will introduce others and these risks must be assessed. Another consideration is that regulations require that many of these items require a periodic statutory inspection on safety critical components.

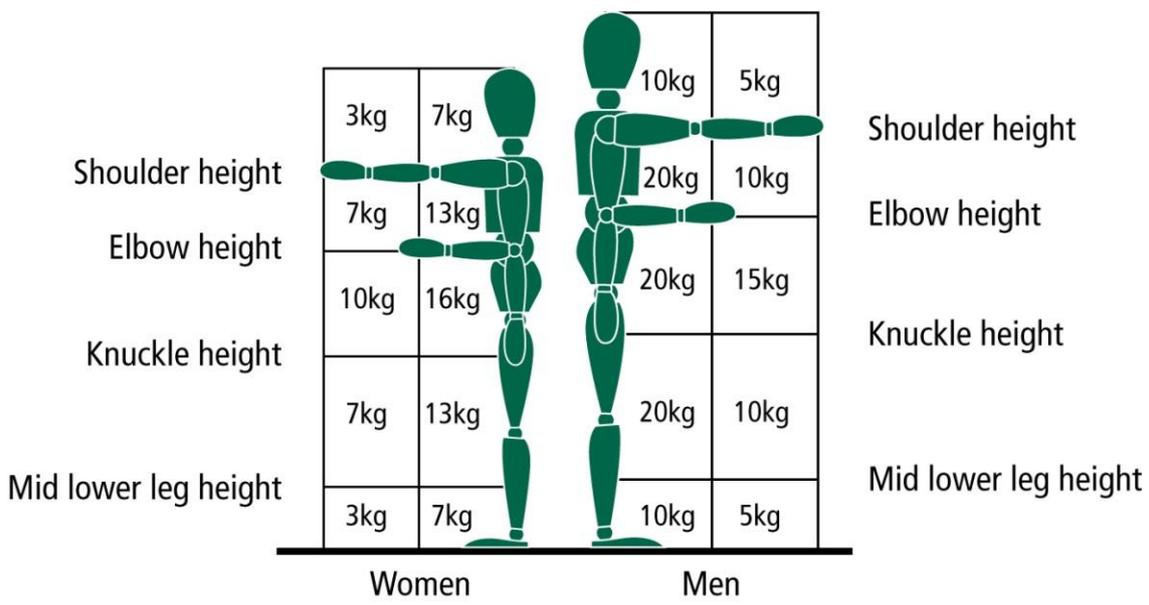
HSE guidance

(Slide No 24 / eLearning Page 23)

The diagram on the next page shows the amounts that we can transport will change depending on how close to the body the load can be held and how high up or low down it is. These weights are guides only and individually you may not be able to manage these weights.

Your personal attributes will affect how much you can handle. If you have any doubts you should ask for assistance or use equipment, but only if you have received the necessary training, to move the load.

Moving & Handling



The weight you can lift will also decrease if the manoeuvre you are to undertake involves bending, stretching, twisting, pushing loads up slopes and over uneven floors.

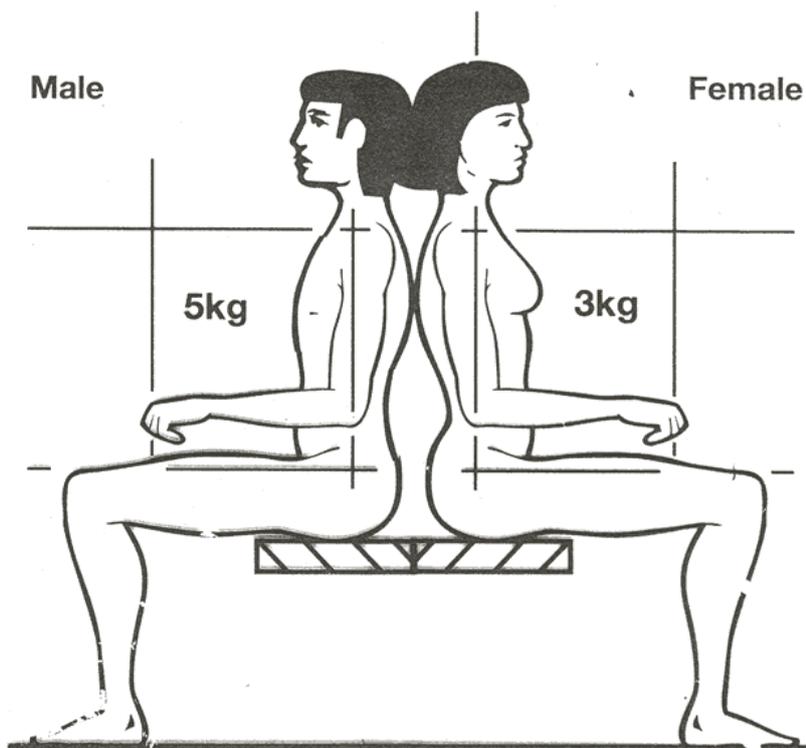
In order to avoid risk the principle is always to lift only when necessary. Ergonomics can be defined as **fitting the job to the person, rather than the person to the job.**

The ergonomic approach looks at manual handling as a whole. It takes into account a range of relevant factors, including the nature of the task, the load, the working environment and individual capability and requires worker participation.

The ergonomic approach shows clearly that emphasis on how much weight can be lifted is too simple a view of the problem and may lead to incorrect conclusions. Instead, an ergonomic assessment based on a range of relevant factors should be used to determine the risk of injury and point the way to remedial action.

Guidelines for handling whilst seated

(Slide No 25 / eLearning Page 24)



Pushing / pulling guidelines

(Slide No 26 / eLearning Page 25)

Assuming force applied with hands between knuckles and shoulder height, the figures below highlight the recommended maximum amount of force that needs to be applied to push or pull a load.

	Male	Female
Guidelines for stopping/starting a load	20 Kgs (ie about 200 newtons)	15 Kgs (ie about 150 newtons)
Guidelines for keeping the load in motion	10 Kgs (ie about 100 newtons)	7 Kgs (ie about 70 newtons)

Over the stated guidelines an assessment has to be undertaken

Team handling

(Slide No 27 / eLearning Page 26)

Handling by two or more people may make possible an operation that is beyond the capability of one person, or reduce the risk of injury to a single handler. However, it may introduce additional problems that need to be assessed. The load that a team can handle safely is less than the sum of the loads that the individual team members could cope with when working alone.



As a guide, the capability of a two-person team is two-thirds the sum of their individual capabilities and for a three-person team the capability is half the sum of their individual capabilities. There may be additional difficulties if:

- Team members get in the way of each other's' sight or movement; or
- The load does not have enough good handholds
- The background noise level is too high to allow easy communication between team members

For safe team handling there should be enough space for the handlers to manoeuvre as a group. They should have adequate access to the load, and the load should provide sufficient handholds.

One person should plan and then take charge of the operation, ensuring that movements are co-ordinated. However, there should be good communication between team members.

Sources of information

(Slide No 28 / eLearning Page 27)

It is important that you regularly update your skills. This can be done by attending refresher training sessions where you will get information on the most up to date guidance.

Guidance on the risks associated with moving and handling is constructed from evidence based practice. That is evidence of what works to reduce the risk of injury.

Guidelines change based on the best evidence available and organisations such as the **Health and Safety Executive** and the **National Back Exchange** and many others are excellent references and publish updates regularly.

- Health and Safety Executive
www.hse.gov.uk
- National Back Exchange
www.nationalbackexchange.org

Acknowledgments

The North West Core Skills Programme would like to particularly acknowledge the following people for their advice and support in developing the Moving & Handling Level 1 education resources:

- Karen Woodward Bolton NHS Foundation Trust
- Graeme Scott Mersey Care NHS Trust
- Julie Rigby East Lancashire Hospitals NHS Trust
- Claire Lampkin Royal Liverpool and Broadgreen Hospitals NHS Trust
- Sharon Bretherton Royal Liverpool and Broadgreen Hospitals NHS Trust
- Maxine Dunn Pennine Care NHS Foundation Trust
- Steve Moran Cheshire and Wirral Partnership NHS Foundation Trust
- Heidi McMahon St Helens and Knowsley NHS Trust
- Sue Westbury University Hospitals of Morecambe Bay NHS Foundation Trust

- Angela Dotchin The Christie NHS Foundation Trust
- David Foulkes Liverpool Heart and Chest Hospital NHS Foundation Trust

- Linda Mannion Lancashire Care NHS Foundation Trust
- Claire Beesley East Cheshire NHS Trust
- Kathy Kearney Alder Hey Children’s NHS Foundation Trust
- Steve Wanless Tameside Hospital NHS Foundation Trust
- Tracy Bryning Liverpool Women’s NHS Foundation Trust
- Kath Briody Salford Royal NHS Foundation Trust

- Menna Harland Liverpool John Moores University
- Nick Moseley Moseley Multimedia Ltd