

# Moving & Handling Workbook

# Aim & Objectives

## Aim

To enhance your skills and knowledge to safely move and position a care client.

## Objectives

To provide an understanding of the regulatory standards governing moving and handling of care clients.

To understand causes of injuries and prevention techniques.

To understand and gain practical experience of moving and handling best practice and techniques for a range of scenarios, utilising a range of equipment.

# What is Moving and Handling?

The transporting or supporting of a person using moving and handling techniques and equipment.

# The Legislation

# Current Legislation

## Current Legislation

There are 6 separate legislations governing moving and handling under the Workplace Activity Legislation Framework:

- Manual Handling Operations Regulations 1992 (MHOR)
- Health & Safety at Work Act 1974 (HASAWA)
- Management of Health and Safety at Work Regulations 2006 (MHSAW)
- Reporting Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- Provision and Use of Work Equipment Regulations 1998 (PUWER)

## Manual Handling Operations Regulations 1992 (MHOR)

Requires employers to avoid, assess and reduce the risk of injury from manual handling.

*'Manual handling operations' means any transporting or supporting of a load (including the lifting, putting down, pushing, pulling, carrying or moving thereof) by hand or by bodily force.*

*A 'load' is anything which is moveable e.g. inanimate object, person or animal.*

### Employer Duties

So far as is **reasonably practicable**, **avoid** the need for their employees to undertake any manual handling operations at work which involve a risk of their being injured.

*'So far as is reasonably practicable' means that the degree of risk in a particular activity or environment can be balanced against the time, effort, cost and physical difficulty of taking measures to avoid the risk.*

## Manual Handling Operations Regulations 1992 (MHOR)

Where it is **not reasonably practicable**:

- Complete an assessment to identify risk factors associated with manual handling operations. Reviewed if no longer valid and there has been significant changes in manual handling operations.
- Take appropriate steps to reduce the risk of injury associated with manual handling operations.
- Take appropriate steps to provide employees with indications of the weight of load, heaviest side of load whose centre of gravity is not positioned centrally.

## Manual Handling Operations Regulations 1992 (MHOR)

### Employee Duties

Where manual handling operations involve a **risk of injury** appropriate steps must be taken by employees to reduce that risk in particular to:

- Physical suitability of the employee to carry out the operations.
- Clothing, footwear etc. suitable.
- Employee knowledge and training.
- Results of any risk assessments.
- Employee is within group identified by the risk assessment.
- Results of any health surveillance.
- Make full and proper use of any system of work provided for use by employer i.e. follow policy, comply with risk assessment, attend training, correctly use equipment and report near misses or accidents.

## Manual Handling Operations Regulations 1992 (MHOR)

One of the key tools in reducing risk of injury from manual handling is **risk assessment**.

Factors to consider when undertaking a manual handling **risk assessment**:

- Suitable risk assessments completed for any hazardous manual handling operations that cannot be avoided.
- Assessment completed by employees with knowledge of the operations.
- Assessments should be recorded and made easily available to those carrying out the operations.

Take into account an '**ergonomic approach**' considering:

- Nature of the **TASK**
- The **LOAD**
- The working **ENVIRONMENT**
- Individual **CAPABILITY**
- **OTHER FACTORS** e.g. equipment



## Health & Safety at Work Act 1974 (HASAWA)

**Applies to employers and employees in all areas of safety at work.**

This is the **'umbrella'** under which more specific regulations, such as the Manual Handling Operations Regulations, 1992, are made.

### Employer Duties

The Health & Safety at Work Act require employers to ensure, **so far as is reasonably practicable**, the health, safety and welfare at work of all their employees.

*'So far as is reasonably practicable' means that the degree of risk in a particular activity or environment can be balanced against the time, effort, cost and physical difficulty of taking measures to avoid the risk.*

*If these measures are so disproportionate that it would be quite unreasonable for the employer to have to incur them to prevent the risk, they are not obliged to do so.*

## Health & Safety at Work Act 1974 (HASAWA)

### Employer Duties

- Provision and revision of a written statement of their general policy with respect to health and safety of employees at work, how the policy will be implemented and bring the statement and any revisions to the notice of employees.
- Provision and maintenance of plant and safe systems of work.
- Safety in the collection, use storage and transport of loads and substances.
- Provision of information, instruction, training and supervision of employees.
- Maintaining a safe workplace and access.
- Maintaining a safe and healthy working environment, including welfare facilities.

**Employers and employees who fail to comply with any of the duties described in the Act make themselves liable for prosecution.**

## Health & Safety at Work Act 1974 (HASAWA)

### Employee Duties

- Take reasonable care for the health and safety of themselves and of other persons who may be affected by what they do or fail to do at work - their acts or omissions.
- Take positive steps to understand hazards in the workplace.
- Comply with safety guidance, regulations and procedures.
- Ensure that their actions do not put themselves or others at risk.

## **Management of Health & Safety at Work (Amendment) Regulations 2006 (MHSAW)**

**Sets out a range of responsibilities for employers with regards to the undertaking of risk assessments of all hazardous workplace activities.**

In the context of people handling, this will compliment the Manual Handling Operations Regulations, 1992 and include assessing the risks to the clients and care staff when undertaking hazardous people handling operations.

### **Employer Duties**

Set out a range of responsibilities for employers, the key focus being on risk assessment.

### **Risk Assessment**

Every employer shall make a suitable and sufficient assessment of:

*The risks to the health and safety of their employees to which they are exposed while at work.*

*The risks to the health and safety of persons not in their employment arising out of or in connection with the conduct by their undertaking e.g. clients, agency staff, contractors, students.*

## **Management of Health & Safety at Work (Amendment) Regulations 2006 (MHSAW)**

### **Risk Assessment**

All those affected by risk should be made aware of the nature of risks and the appropriate measures in place.

Employers are required to make a written report of any significant risks identified within the assessment.

Specific risk assessments should be in place for; persons under 18 years of age, expectant mothers, mothers who have given birth in the previous 6 months, breastfeeding mothers.

Employer must regularly review risk assessments to ensure still applicable to activities.

## Management of Health & Safety at Work (Amendment) Regulations 2006 (MHSAW)

### Principles of Risk Prevention

Employers must implement **protective and preventative measures** where hazardous workplace practices are involved.

These measures may include:

**Avoiding Risks** – wherever reasonably practicable.

**Evaluating Risks** that cannot be avoided:

- Considering a mechanical process to undertake the activity e.g. hoists for lifting.
- Adapting the activity for the person e.g. 2 person task, use of equipment.
- Offering training, instruction and supervision, adapted and repeated as required.

### Employee Duties

Each employee must take care of their own health and safety e.g. adhere to procedures, correct use of equipment, report hazards.

## **Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)**

**Reporting accidents, incidents and ill health at work.**

### **Employer / Employee Duties**

Reporting accidents, incidents and ill health at work is a legal requirement for an employees or someone in control of work premises. This information enable HSE and local authorities to identify where and how risks arise and complete investigations of incidents.

### **Death or Specified Injury**

If an employee suffers a specified injury or death in the workplace then this must be reported to the relevant authorities within 10 days. Specified injuries include; fractures, loss of limbs, sight loss, burns, loss of consciousness.

### **Disease**

Work related disease must also be reported.

Reportable work place diseases include; carpal tunnel syndrome, dermatitis, asthma, asbestosis, hand arm vibration syndrome.

### **Dangerous Occurrences**

An occurrence which may have caused a reportable injury must also be reported e.g. overturning equipment, failure of equipment or components.

## **Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)**

**Applies to the use of lifting equipment in all work activities.**

Lifting equipment includes any equipment used at work for lifting and lowering loads e.g. patient hoists, stand and raising aids, bath lifts, slings.

These regulations apply to the use of lifting equipment in all sectors of industry and in all work activities. In the care profession the most common piece of lifting equipment is the patient hoist.

### **Employer/Employee Duties**

#### **Examination and Inspection**

Employers must ensure all lifting equipment which is exposed to deterioration is thoroughly examined by a competent person within the recommended time periods (6 months or less) and any defects reported and repairs completed to manufacturers' specification. Competent person has required knowledge, experience and qualifications to complete inspection of lifting equipment.

#### **Training and Planning of Lifting Operations**

Employers must ensure all lifting operations are properly planned by a competent person, appropriately supervised and carried out in a safe manner.



## **Provision and Use of Work Equipment Regulations 1998 (PUWER)**

**Applies to all equipment used at work, including people handling equipment, e.g. transfer boards, slide sheets, handling belts, rota stands and turntables etc.**

### **Employer Duties**

- Ensure staff only use equipment that is suitable for the task.
- Employees are found to be competent (trained and assessed) when using handling aids.
- Equipment is kept in good repair.

# The Spine

# Spinal Function

## Spinal Function

The elongated 'S' construction of the spine increases the load carrying capability giving it strength and elasticity to absorb the shocks of

running, jumping, twisting etc... as well as effectively protecting the spinal cord which transmits signals from the brain throughout the body.

The spinal column consists of **33 bones** (vertebrae) of which

**24 are moveable.**

**7 cervical** – neck

vertebrae

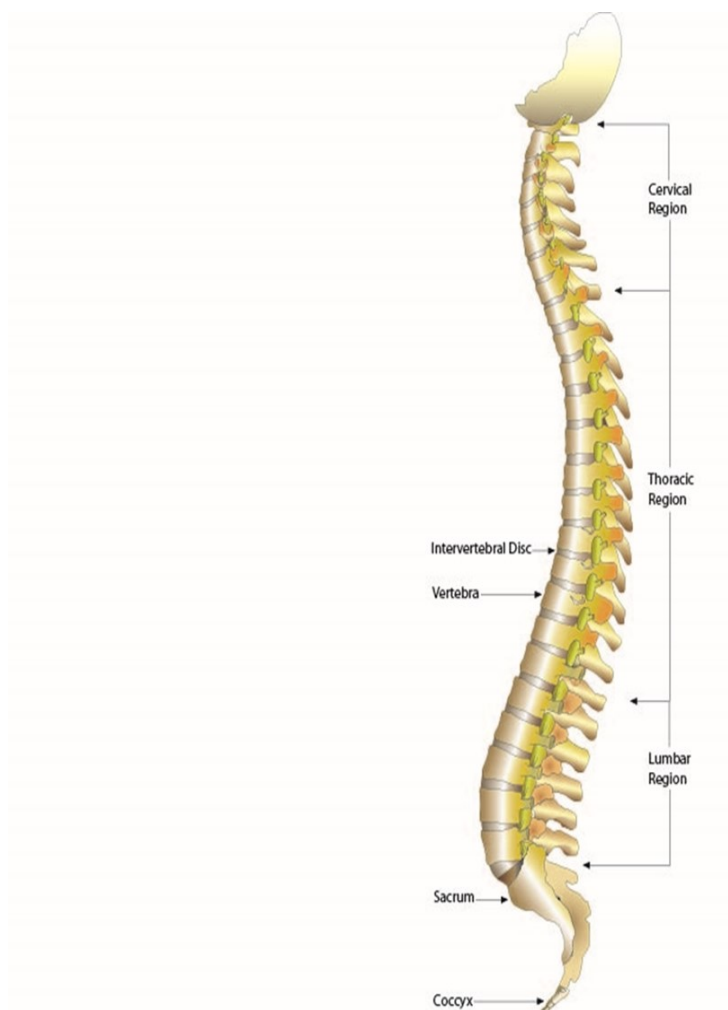
**12 thoracic** – chest

vertebrae

**5 lumbar**- lower back vertebrae

**5 sacrum** - fused

**4 coccyx** - fused

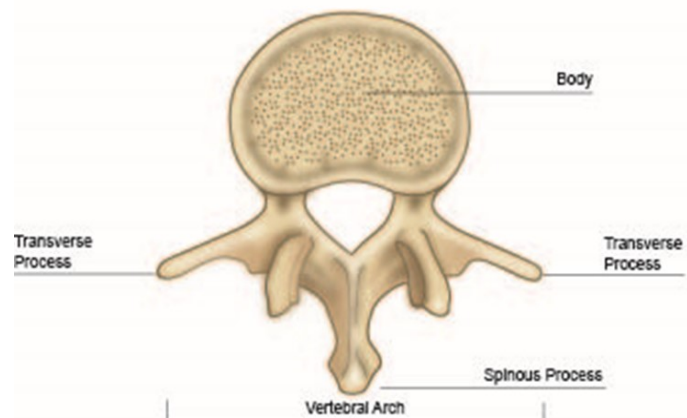


## Vertebra

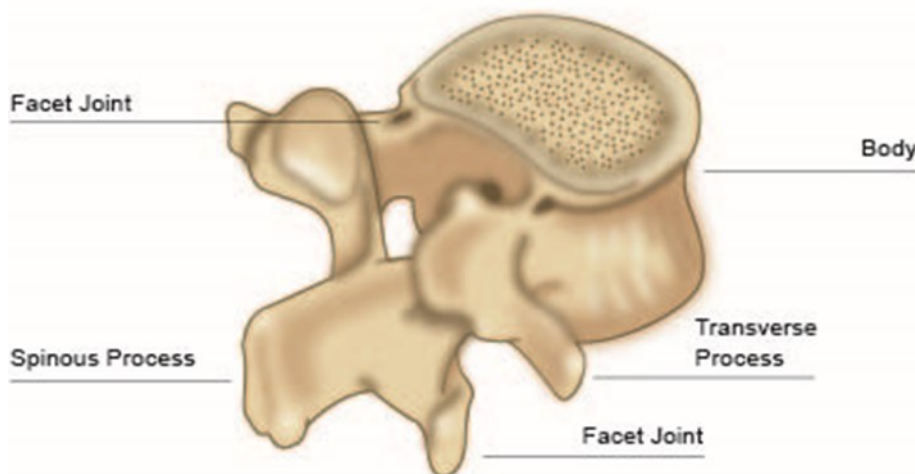
Each vertebra consists of 2 parts:

**Body** – main weight bearing part of the spine

**Vertebral Arch** – surrounds and protects the spinal cord



Vertebrae are interconnected above and below by the spinal facet joint as well as muscles and tendons to support the spine and enable movement.



## Intervertebral Disks

Vertebrae are interconnected above and below by the spinal facet joint as well as muscles and tendons to support the spine and enable movement.

The intervertebral discs are soft cushions made from cartilaginous tissue.

Facilitate movement, separate individual Vertebra and act as a shock absorber as an individual moves.

Each intervertebral disc consists of 2 parts:

**Nucleus Pulposus** – jelly like centre

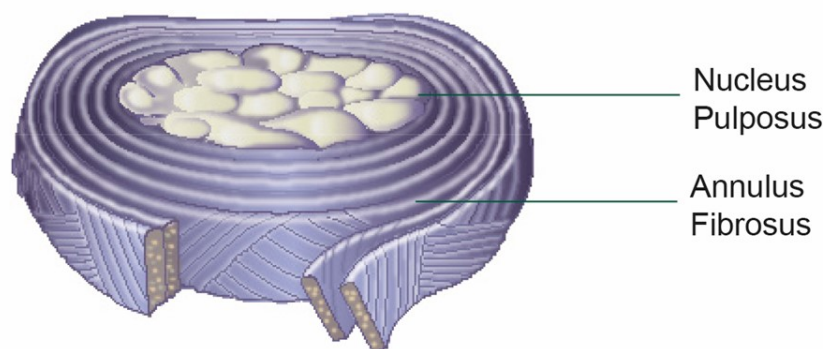
**Annulus Fibrosus** – strong fibrous ring that attaches to the vertebra

The disc has a high fluid content

within the nucleus which provides

flexibility and absorption between the vertebra.

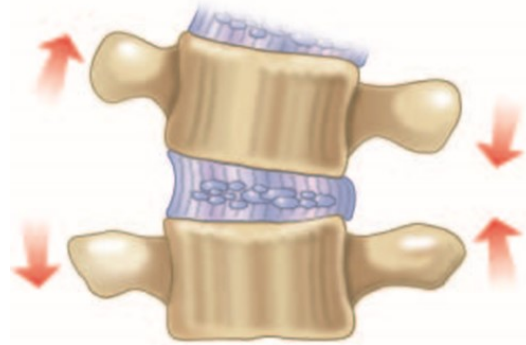
Discs regenerate at night as we sleep.



## Damage to Intervertebral Disks

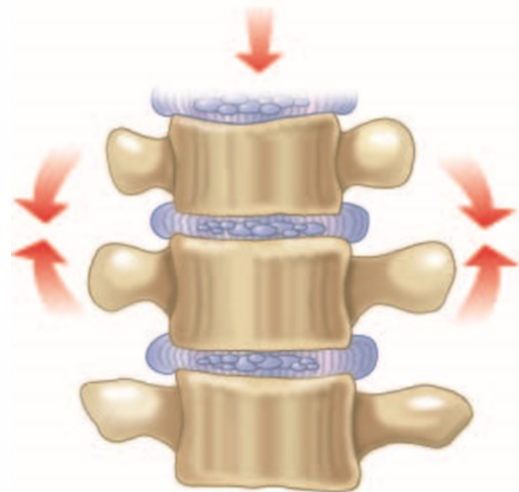
**Tension** – applies compression to one side and tension to the other.

Caused by excessive forward flexion or side flexion.

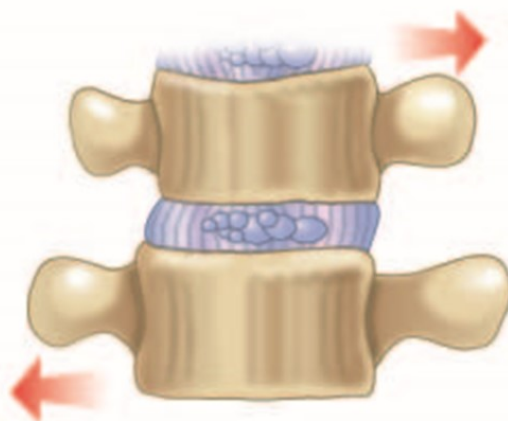


**Compression** – downward force on the vertebrae compresses the discs and causes them to shorten and widen.

Caused by a fall e.g. diving into shallow water.



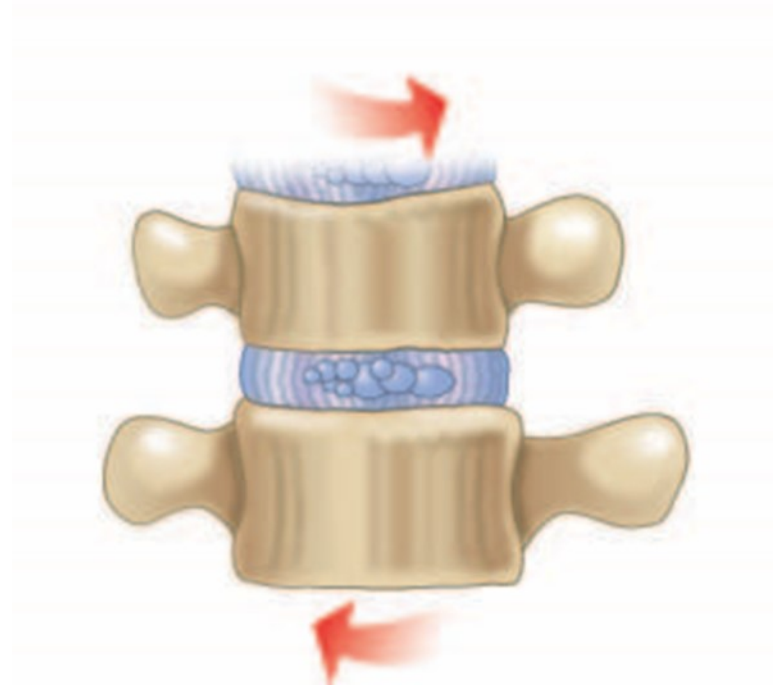
**Shear** – application of a load parallel to the vertebral surfaces.  
Caused by whiplash.



## Damage to Intervertebral Disks

**Torsional / Twisting** – excessive twisting to the spine causing the fibres of the intervertebral disks to be stretched and weakened.

Caused by twisting the spine while carrying weighted object.



**During manual handling a combination of compression, torsional, tension and shear forces may occur throughout the activity.**

## Good Posture

### Tips for good posture

- Stand tall
- Hold head straight with earlobes in line with the middle of shoulders
- Shoulders back and arms hanging naturally down sides of body
- Lightly draw in core abdominal muscles
- Stand with weight mostly on balls of feet
- Feet set shoulder-width apart for balance
- Prominent foot slightly forward
- Knees slightly bent

**Posture Check** – Stand against a wall with head, shoulders, bottom and back of feet in contact with the wall surface.

This will ensure spine is aligned.

### Good posture will:

- Keep bones and joints in alignment
- Decrease stress placed on bones and joints
- Prevent back ache and muscular pain



# Biomechanics

# Biomechanics

## Biomechanics

### Biomechanics

How forces are exerted by the muscles and how gravity impacts on the skeletal system.

### Centre of Gravity

The point at which the entire weight of a body is concentrated so that if supported at this point the body would remain in equilibrium in any position.

A person of usual weight proportions, in the standing position, the centre of gravity lies roughly within the pelvis.

Pelvis is paramount for standing, walking and sitting. To assist a client with reduced mobility place one hand on the pelvis or hip area to initiate movement while maintaining good contact across the client's back.

An overweight client will have centre of gravity lower and further forward in the body.

## **Biomechanics**

### **Best Practice**

#### **Standing from a sitting position**

Move pelvis forward in the chair and move head over the pelvis to bring centre of gravity forward

#### **Moving in bed**

When client lying flat in bed, move the client onto their side by rolling the pelvis

#### **Kneeling**

When moving seated clients, care worker should kneel on one knee to lower the centre of gravity and optimise stability

#### **Line of gravity**

To optimise stability; keep shoulders aligned with pelvis (centre of gravity) have feet slightly apart, one foot in front of the other and knees slightly bent

#### **Leaning forward**

Avoid lifting while leaning forward as outwith line of gravity as causes instability and puts strain in muscles and tendons

#### **Keep load close to body**

To prevent stress on muscles and tendons, keep arms as short as possible and load as close to body as possible to keep alignment with line of gravity

# Risk Assessment

## Risk Assessment

### Manual Handling Operations Regulations, 1992 (as amended)

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

*“load” is anything which is moveable, e.g. inanimate object, person or animal.*

Risk Assessment aims to eliminate or reduce the risk of manual handling injuries by taking into account a wide range of factors:

- Nature of the task
- Load
- Working environment
- Individual capability
- Other factors including equipment

## **Risk Assessment**

**Manual Handling Operations Regulations, 1992 (as amended)**  
recommends:

### **Avoid**

Wherever possible, avoid a hazardous manual handling situation.

### **Assess**

If avoidance is not possible, make a 'suitable and sufficient' assessment of the hazards.

### **Reduce**

Follow the Risk Assessment to reduce the risk of injury to all persons involved. (Training of staff in safer handling techniques, introducing appropriate handling aids, changing work patterns).

### **Review**

Risk assessments should be regularly reviewed to reflect changes in work practices, equipment, policies.

## Risk Assessment

### Steps to Risk Assessment

- Identify the hazards (anything that can cause harm).
- Decide who might be harmed.
- Evaluate the risks (likelihood high, medium, low of injury caused by hazard).
- Record your significant findings.
- Regularly review your assessment.

## Risk Assessment

### Evaluate the Risks

- Health declarations in place.
- Reorganise work activities.
- Consideration given to environmental factors.
- Offer manual handling training to your staff and assess their levels of competence.
- Appropriate handling aids should be made available.
- Offer back-care advice to your staff.
- Relevant documentation in place – appropriate and current, e.g. care plans, risk assessments, policy & procedures.
- Uniform/clothing guidelines in place.
- Auditing systems to assess effectiveness .



## Risk Assessment

### Record Findings

- Risk assessments need to be 'retrievable'.
- Risk assessments need to be made available to those at risk.
- Risk assessments need to be user-friendly.

# Controversial Techniques

## Controversial Techniques

### The Drag Lift

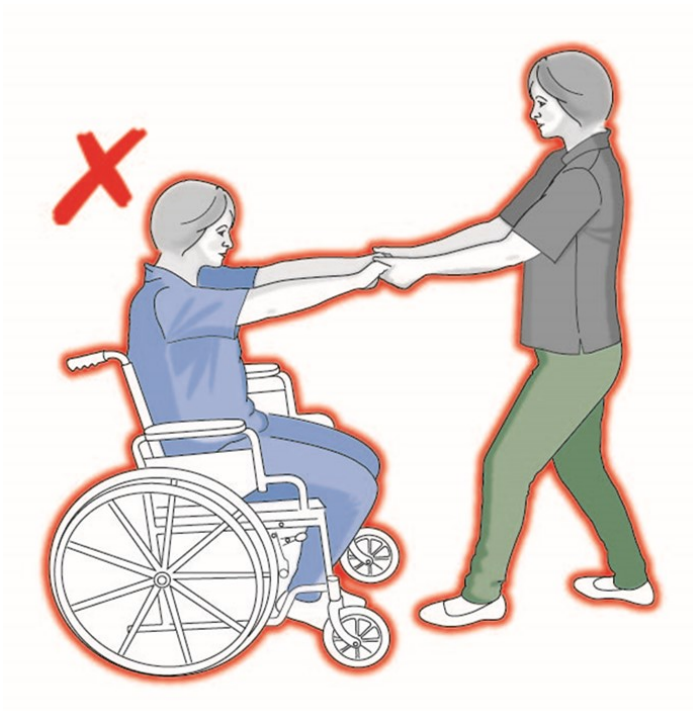


## Controversial Techniques

### The Drag Lift



### The Front Assisted Lift



## Controversial Techniques

### Through-arm Lift



### Arm and Leg 'Lug'/Hammock Transfer



## Controversial Techniques

### The Bear Hug/Pivot Transfer (Arms around carer's neck)



## Controversial Techniques

### The Orthodox Lift



### The Australian Lift/Shoulder Lift

