



Manual Handling Awareness - Delegate Handout

## Delegate Handout Workbook

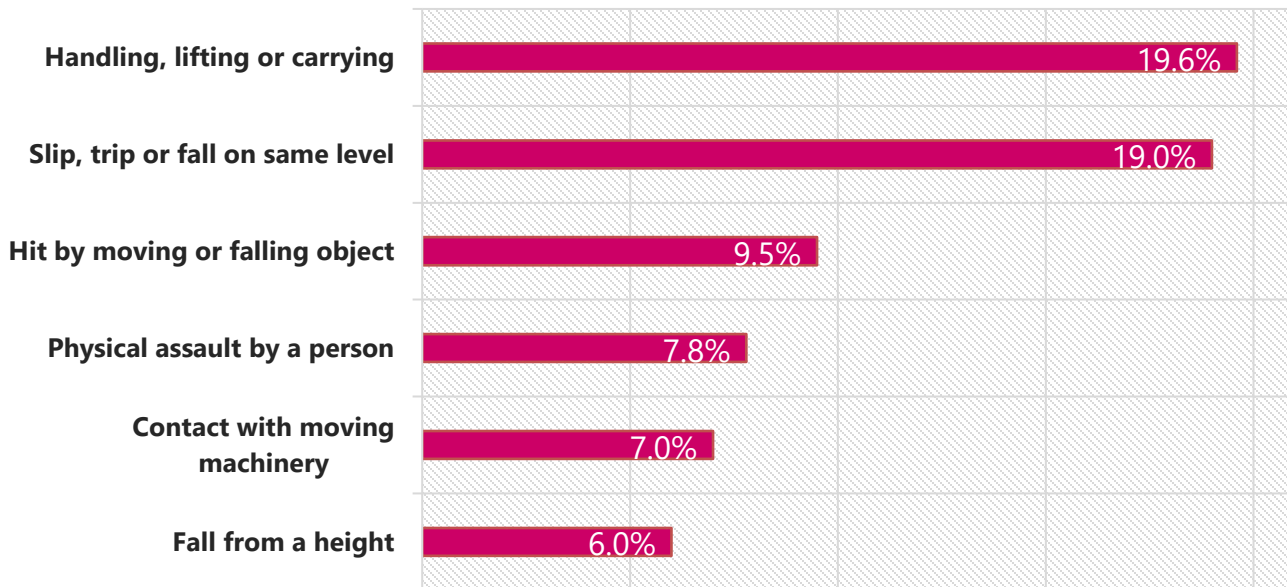
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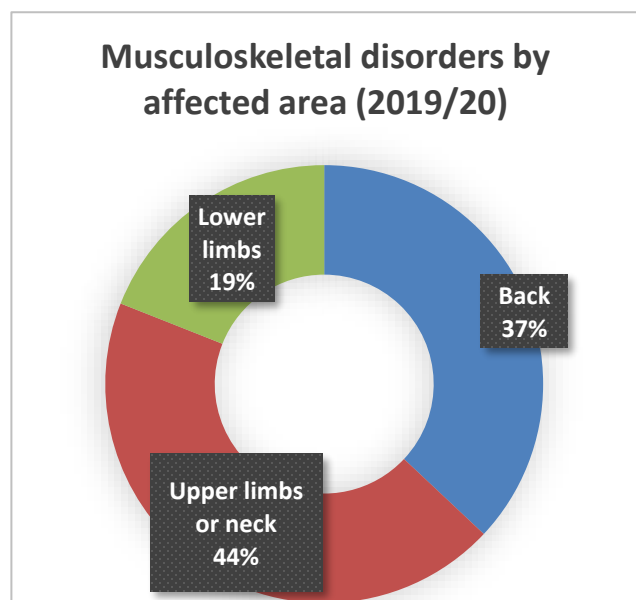
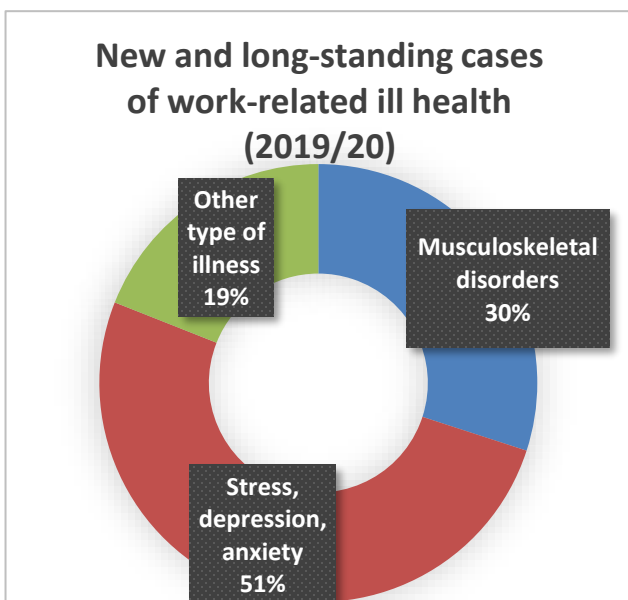


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### Most common causes of workplace injury (non-fatal injuries, 2017-2020)

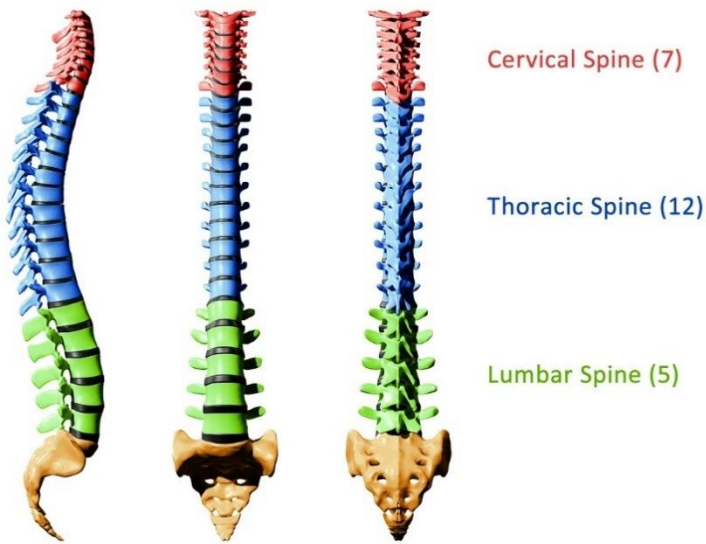


Source: Labour Force Survey (LFS) self-reported workplace non-fatal injuries, 2017/18 to 2019/20.



Source: Labour Force Survey (LFS) self-reports, published 2020.

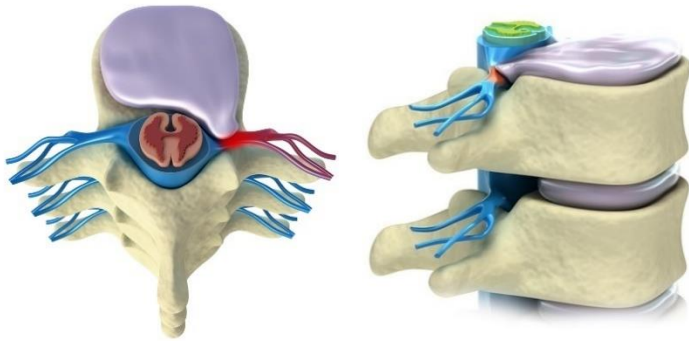
- The total number of workers suffering from work-related musculoskeletal disorders in 2019/20 was 480,000 out of a total of 1.6 million for all reported new and long-standing cases of work-related ill health; this represents 30% of the total. [Note: Stress, depression, or anxiety account for 51% of the total.]
- In 2019/20 an estimated 8.9 million working days were lost due to work-related musculoskeletal disorders. This equates to an average of 18.4 days lost per case, and this represents 27% of all working days lost due to work-related ill health. [Source: Labour Force Survey.]



Cervical Spine (7)

Thoracic Spine (12)

Lumbar Spine (5)



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## Vertebrae

Small round pieces of bone in the spine, which stack together to form the spinal column. The spinal cord runs down a hollow tube created by holes at the back of each vertebra.

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## Intervertebral Discs

Strong, flexible layers of tissue sandwiched between successive vertebrae. These are made up of a tough, protective outer layer and a fluid inner region. This enables the spine to flex and move.

Key risks – Stooping/twisting then loading.  
Sitting for long periods.

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## Muscle, tendons and tissue

Tissues attached to bone directly or via tendons which stretch and contract to allow the body move.

The main muscles in your lower back:  
- contract when you lean forward to hold you back from falling over  
- pull you back into an upright position.

Key risks – Over stretch and over load.

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# Causes of Back Pain



Contributing factor	Key Issues
<i>Psychological factors</i>	<ul style="list-style-type: none"> <li>Stress and fatigue cause distractions which may increase risk</li> <li>Psychological strain can develop into physical pain</li> </ul>
<i>Disease</i>	<ul style="list-style-type: none"> <li>Disease can directly affect the back, for example through Rheumatoid arthritis or Osteoporosis</li> </ul>
<i>Age and cumulative strain</i>	<ul style="list-style-type: none"> <li>Exposure to risk factors accelerates natural degeneration of body tissue.</li> <li>Cumulative strain can lead to serious damage over time.</li> </ul>
<i>Gender</i>	<ul style="list-style-type: none"> <li>Load limits should be reduced by 30% for women.</li> <li>Pregnant women are under increased risk and the more pregnancies a woman has, the more likely she is to develop a slipped disc.</li> </ul>
<i>Genetic make-up</i>	<ul style="list-style-type: none"> <li>Some people are genetically more predisposed to develop back pain.</li> </ul>
<i>Lifestyle</i>	<ul style="list-style-type: none"> <li>Smoking, diet, posture, fitness, pregnancy can all increase risk.</li> </ul>
<i>Leisure activities</i>	<ul style="list-style-type: none"> <li>Leisure activities and sports can carry a high risk and effects of fatigue, injury, stress, etc. often carry over in to the workplace.</li> </ul>

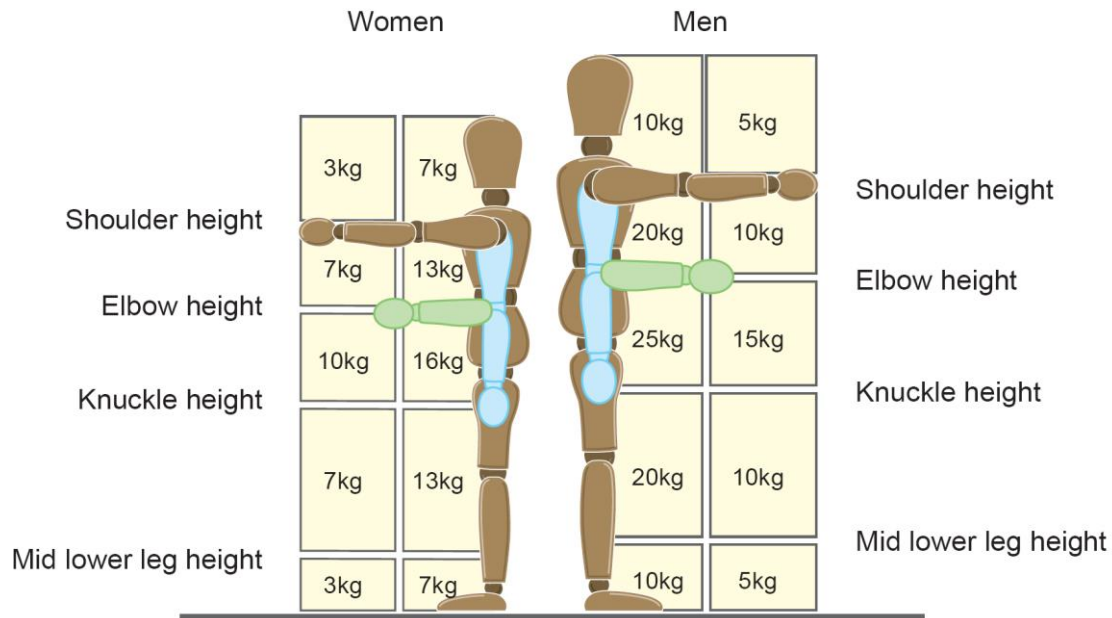
# Static Handling

## The definition of manual handling is:

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

The Manual Handling Operations Regulations 1992 (as amended) define a load to be “a discrete moveable object”. However, any tool or piece of machinery used for its intended purpose is not considered to be a load.

## You should take the following suggested load guidelines into consideration when performing manual handling operations:



### Employees are legally required to:

- Take reasonable care of their own health and safety and that of their colleagues and clients.
- Use available work and safety equipment, in accordance with the training and instruction provided.
- Follow appropriate systems of work laid down by the employer in their manual handling policy.
- Use proper channels to inform management of possible hazards or shortcomings in manual handling activities.

### Employers are legally required to:

- Avoid hazardous manual handling operations
- Make suitable and sufficient assessment of risks
- Reduce risk to lowest reasonably practicable level
- Provide general info, or precise information where reasonably practicable, on the weight and distribution of the load.

# Dynamic Risk Assessment

As has already been discussed, before attempting any potentially hazardous manual handling operation you should pause and ask the question *“Does the object need to be moved manually at all?”*

**In many cases, manual handling operations can be completely removed with a little thought and forward planning. *If this is the case, then do it!***

There are however a range of operations that cannot be avoided, which carry a potential for producing injury - i.e. they include a degree of risk. Where it is not possible to completely remove the handling operation then it is your task to look closely at the operation and decide the nature and degree of risk involved - i.e. assess the handling operation.

The regulations identify four categories of assessment which are:

- **T**ask
- **I**ndividual
- **L**oad
- **E**nvironment

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## TASK



Stooping?  
Twisting?  
Over reaching?  
Carrying distance?  
Repetitive?  
Reaching upwards?

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## INDIVIDUAL



Require unusual capability?  
Risk to those pregnant?  
Need for special training?  
Risk injuring those susceptible to strains and sprains?

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## LOAD



Heavy?  
Bulky/unwieldy?  
Unstable/unpredictable?  
Difficult to grasp?  
Intrinsically Harmful?

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## ENVIRONMENT



Postural constraints?  
Poor floors?  
Variation in levels?  
Hot/cold/humid conditions?  
Strong air movements?  
Poor lighting conditions?

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## The Semi-Squat Technique

The Semi-squat technique is a safe and efficient approach to lifting and lowering, and reduces the risk to your back. It may be summarized by the key elements outlined below which make up the semi-squat technique. It is important to remember that adaptations to this technique may be used for awkward shaped loads.

### 5. Neck and Head

The neck and head should be in a relaxed neutral position maintaining good peripheral vision.

**Main benefit** – looking down tightens the muscles and encourages stooping which can be avoided when looking ahead. Maintaining peripheral vision gives a greater awareness of environmental risks e.g. passing traffic.

### 4. Hips and Back

This can now be straight but no longer upright. The movement must come from the hip joints.

**Main benefit** – the posture should be reminiscent of a weight lifter so focusing the lift to the legs. N.B. Those with lower back conditions may want to keep their backs slightly more upright while bending at the knees more.

### 3. Knees

Bend the knees but not beyond 90°. Keep the heels on the ground.

**Main benefit** – this reduces the flexing of the knee which can benefit those with knee problems.

### 2. Feet

Take a wide, slightly asymmetric stance.

**Main benefit** - with wider stance larger loads can be accommodated and the lift can be achieved within a good base of support...

### 6. Grip

Take a comfortable palm and whole finger grip.

**Main benefit** – the semi-squat lift is especially useful for lifting crates/trays or boxes with higher handles.

### 7. Load Close

Keep the load close at all times.

**Main benefit** - the closer the load is to you, the more you reduce over-stretching and the leverage effect.



### 1. Assess

Before any manual handling event, a quick assessment should be completed considering the load, task, environment and the individual themselves.

**Main benefit** – don't lift objects which exceed the load limits. Use extra care with unpredictable loads, like those whose contents might lift for example.



## Top heavy movement - the classical and harmful approach to lifting

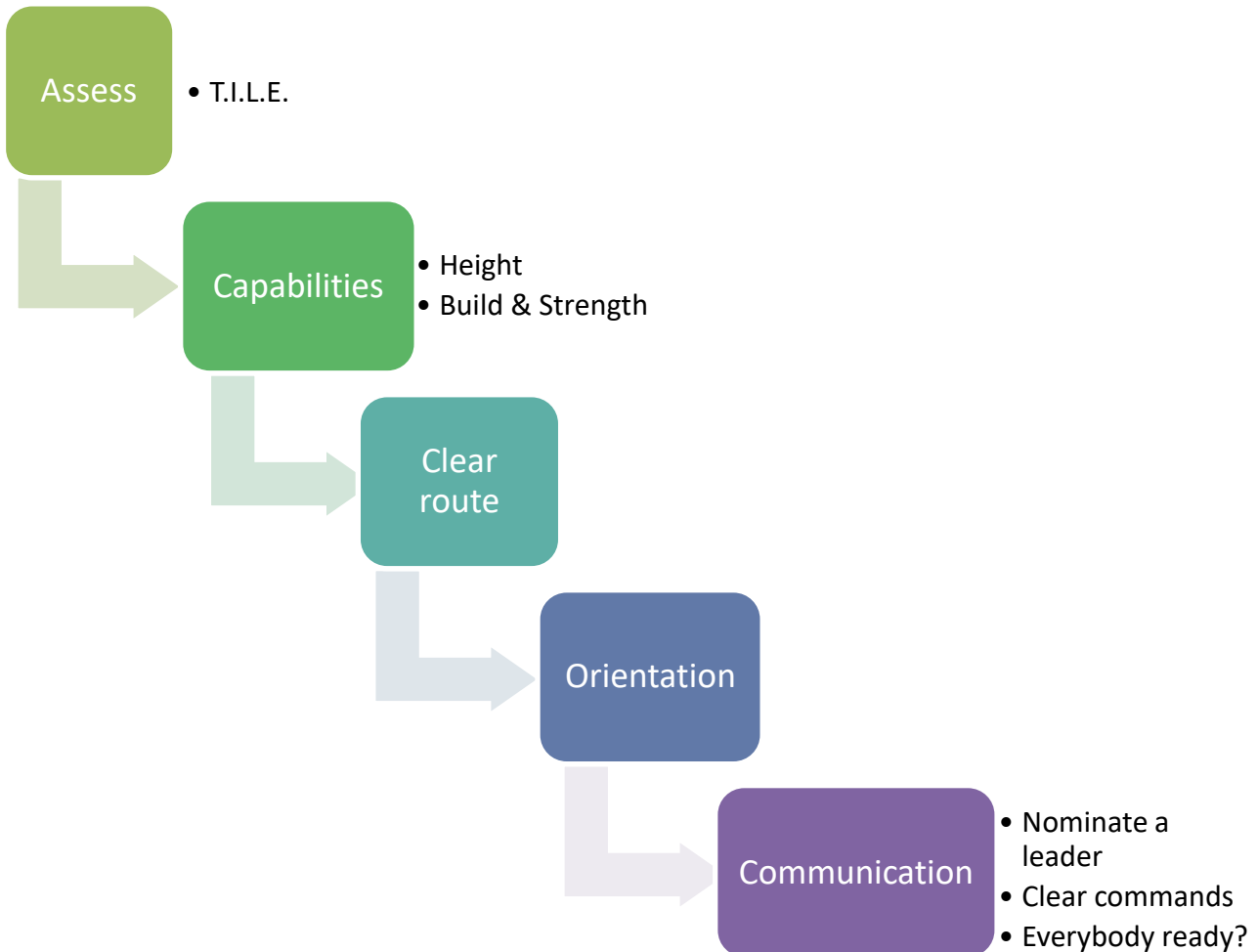
Top heavy movement damages your back because it involves:



Description	Main Risk
<i>Stooping</i>	Bending your back puts pressure on your discs, increases the leverage effect and abuses the back muscles.
<i>Twisting</i>	The discs are placed under pressure when you stoop and twist your spine.
<i>Over-stretching</i>	This can lead to straining of the back muscles.
<i>Parallel hands and feet</i>	You lack stability and cannot use your leg muscles to lift.

## Team Lifting

Once you have ascertained that the load in question is suitable for team lifting, you should then follow the correct dynamic handling procedure for team lifting.



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## **Publication notes**

Whilst great care has been taken in compiling the information in this booklet, which to the best of OFI's knowledge and belief contains correct information, the authors do not hold themselves responsible for any inaccuracy it may contain.

## **References**

- Work with display screen equipment: Health and Safety (Display Screen Equipment) Regulations 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002.
- Manual handling: Manual Handling Operations Regulations 1992 (as amended).