**MANUAL HANDLING**

Manual handling relates to the moving of items either by lifting, lowering, carrying, pushing or pulling. But it's not just a case of 'pulling something' due to the weight of the item, although this can be a cause of injury. Injuries can be caused because of the amount of times you have to pick up or carry an item, the distance you are carrying it, the height you are picking it up from or putting it down at (picking it up from the floor, putting it on a shelf above shoulder level) and any twisting, bending stretching or other awkward posture you may get in whilst doing a task.

Manual handling is one of the most common causes of injury at work and causes over a third of all workplace injuries which include work related Musculoskeletal Disorders (MSDs) such as upper and lower limb pain/disorders, joint and repetitive strain injuries of various.

Manual handling injuries can occur almost anywhere in the workplace and heavy manual labour, awkward postures and previous or existing injury can increase the risk. Work related manual handling injuries can have serious implications for both the employer and the person who has been injured. Employers may have to bear substantial costs, through lost production, sickness absence costs of retraining, wages/overtime to cover for the absent person and potentially compensation payments. The injured person may find that their ability to do their job is affected and there may be an impact on their lifestyle, leisure activities, ability to sleep and future job prospects.

It is essential therefore those employers manage the risks to their employees. If possible workers should not carry out any manual handling tasks. Where these are necessary mitigate the risk by using some equipment - trollies, fork lift truck etc.

Where tasks are essential and cannot be done using lifting equipment, conveyors or wheeled trollies/cages, a suitable and sufficient risk assessment should be conducted.

**Importance of Manual Handling**

Manual handling injuries can have serious implications for the employer and the person who has been injured. They can occur almost anywhere in the workplace and heavy manual labour, awkward postures, repetitive movements of arms, legs and back or previous/existing injury can increase the risk.

**Prevention of manual handling related injuries**

To help prevent manual handling injuries in the workplace, workers should avoid such tasks as far as possible. However, where it is not possible to avoid handling a load, employers must look at the risks of that task and put sensible health and safety measures in place to prevent and avoid injury.

**For any lifting activity**

Always take into account**:**

* individual capability
* the nature of the load
* environmental conditions
* training
* work organisation

**If worker need to lift something manually**

* Reduce the amount of twisting, stooping and reaching
* Avoid lifting from floor level or above shoulder height, especially heavy loads
* Adjust storage areas to minimise the need to carry out such movements
* Consider how you can minimise carrying distances
* Assess the weight to be carried and whether the worker can move the load safely or needs any help – maybe the load can be broken down to smaller, lighter components

**If worker need to use lifting equipment**

* Consider whether you can use a lifting aid, such as a forklift truck, electric or hand-powered hoist, or a conveyor
* Think about storage as part of the delivery process – maybe heavy items could be delivered directly, or closer, to the storage area
* Reduce carrying distances where possible

**There are some simple things to do before and during the lift/carry:**

* Remove obstructions from the route.
* For a long lift, plan to rest the load midway on a table or bench to change grip.
* Keep the load close to the waist. The load should be kept close to the body for as long as possible while lifting.
* Keep the heaviest side of the load next to the body.
* Adopt a stable position and make sure your feet are apart, with one leg slightly forward to maintain balance

**Some other important measures**

* **Think before lifting/handling.**Plan the lift. Can handling aids be used? Where is the load going to be placed? Will help be needed with the load? Remove obstructions such as discarded wrapping materials. For a long lift, consider resting the load midway on a table or bench to change grip.
* **Adopt a stable position.**The feet should be apart with one leg slightly forward to maintain balance (alongside the load, if it is on the ground). Be prepared to move your feet during the lift to maintain your stability. Avoid tight clothing or unsuitable footwear, which may make this difficult.
* **Get a good hold.**Where possible, the load should be hugged as close as possible to the body. This may be better than gripping it tightly with hands only.
* **Start in a good posture.**At the start of the lift, slight bending of the back, hips and knees is preferable to fully flexing the back (stooping) or fully flexing the hips and knees (squatting).
* **Don’t flex the back any further while lifting.**This can happen if the legs begin to straighten before starting to raise the load.
* **Keep the load close to the waist.**Keep the load close to the body for as long as possible while lifting. Keep the heaviest side of the load next to the body. If a close approach to the load is not possible, try to slide it towards the body before attempting to lift it.
* **Avoid twisting the back or leaning sideways, especially while the back is bent**. Shoulders should be kept level and facing in the same direction as the hips. Turning by moving the feet is better than twisting and lifting at the same time.
* **Keep the head up when handling.**Look ahead, not down at the load, once it has been held securely.
* **Move smoothly.**The load should not be jerked or snatched as this can make it harder to keep control and can increase the risk of injury.
* **Don’t lift or handle more than can be easily managed.**There is a difference between what people can lift and what they can safely lift. If in doubt, seek advice or get help.
* **Put down, then adjust.**If precise positioning of the load is necessary, put it down first, then slide it into the desired position.

**CONTROL AND IMPROVEMENT GUIDELINES FOR MANUAL HANDLING OPERATIONS**

If the manual handling task is assessed to be having a significant risk, appropriate measures should be taken to reduce the risk to an acceptable level. A combination of the following principles should be considered in establishing the appropriate measures:

1. Redesigning of the task;
2. Where complete redesigning of the task is impracticable, appropriate mechanical aids to minimize the need for manual handling tasks should be considered. Provision of appropriate personal protective equipment, and arrangement of team lifting may also be considered.
3. Appropriate training and supervision are provided to employees concerned.

The appropriate control measures corresponding to the respective risks are listed below for consideration.

**1. The Tasks**

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| 1.1 | Ensure proper postures are adopted in manual handling loads through appropriate training and supervision; |
| 1.2 | Provide mechanical aids, such as trolleys, conveyor belts or tail lifts to help handling goods; |
| 1.3 | Avoid the need for excessive repetitive handling of loads by re-scheduling the job; |
| 1.4 | Assign adequate manpower (teamwork) for lifting heavy loads. The team should be properly selected and well-coordinated; |
| 1.5 | Heavier or frequently used items to be stored/placed at a position where requires the least effort in handling, e.g. at waist height; |
| 1.6 | Position frequently used materials at locations readily accessible, such as in front of the operator, to reduce the need for twisting or over-reaching; |
| 1.7 | Adjust the height of the work surface to the correct level. The height of work surfaces should allow most of the work to be performed at around elbow level. Provide adjustable chairs to avoid the need for stooping. Use stools or ladder of suitable height when reaching to high levels to reduce the risk of arching the back; |
| 1.8 | Give employees a variety of tasks or allow sufficient recovery time for them to avoid prolonged repetitive movements; |
| 1.9 | Avoid the need for employees to carry objects which are too bulky. Ensure that objects to be carried do not obscure the vision of the employee; |
| 1.10 | Arrange the job so that it can be carried out with an appropriate pace; |
| 1.11 | Automate the tasks to reduce the need for manual handling. |

**2. The Loads**

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| 2.1 | Split the load if practicable to make it lighter; change its size or shape, or make it easier to grasp by adding handholds or hand grips; |
| 2.2 | Properly secure the load so that it will not shift unexpectedly while being handled; |
| 2.3 | Protect employees from rough surfaces, sharp corners, jagged edges of the load; |
| 2.4 | Provide suitable protective gloves for handling objects with rough surfaces and sharp edges; |
| 2.5 | Provide important information about the load, such as its weight and center of gravity. |

**3. The Working Environment**

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| 3.1 | Arrange for sufficient space for maneuvering loads; |
| 3.2 | Maintain an unobstructed route for transporting objects. Floor should be free from spilled water, oil or slippery substances which will increase the likelihood of slips trips or falls; |
| 3.3 | If long period of standing is required, place a shock absorbent mat on the floor to alleviate stress on leg muscle; or provide a high chair; |
| 3.4 | Maintain appropriate temperature and humidity in the workplace. If manual handling is performed in cold area, proper personal protective clothing should be provided and used; |
| 3.5 | Maintain adequate ventilation; |
| 3.6 | Maintain sufficient lighting to reduce the risk of tripping and striking against objects. |

**4. Individual Capability**

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| 4.1 | Assess the capabilities of the employees concerned and assign suitable manual handling operations to them accordingly; |
| 4.2 | Provide the employees concerned with relevant training. |

**5. Other Factors**

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| 5.1 | Avoid the need for the employee to wear clothings which may impede the manual handling operation. |