



# CPD4dentalnurses

YOUR FUTURE IN YOUR HANDS

## **Manual Handling in Dentistry: Assessing and Managing Workplace Risks**

**Aims:** To provide information about the responsibilities of employers to protect employees from risk of injury when undertaking manual handling tasks in the workplace. To raise awareness for the dental team on the factors to be considered when performing manual handling tasks within the dental practice.

**Learning Outcomes:** On completion of this verifiable CPD article the participant will be able to demonstrate, through completion of a questionnaire, the ability to:

- Identify the relevant legal legislation that an employer should consider for assessing moving and handling risks.
- Define manual handling.
- Understand the points to consider when performing a risk assessment for manual handling tasks.
- Identify the stages of manual handling training in the workplace.
- Understand how to apply filters to assess lifting risks.

### **Introduction**

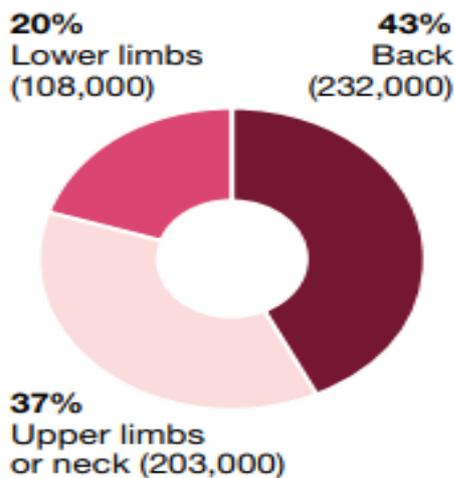
Incorrect manual handling remains one of the most common causes of workplace injury. Such activities can lead to work-related musculoskeletal disorders (MSDs), which affect muscles, joints, tendons, and other soft tissues. These injuries can occur in any workplace, including dental practices, and may result from heavy lifting, awkward postures, repetitive movements, or aggravation of a pre-existing injury.<sup>1</sup>

According to the Health and Safety Executive (HSE), in 2023/2024 approximately 543,000 workers in the UK suffered from work-related musculoskeletal disorders. Of these, 168,000 were new cases, and an estimated 7.8 million working days were lost as a result of these conditions.<sup>2</sup>

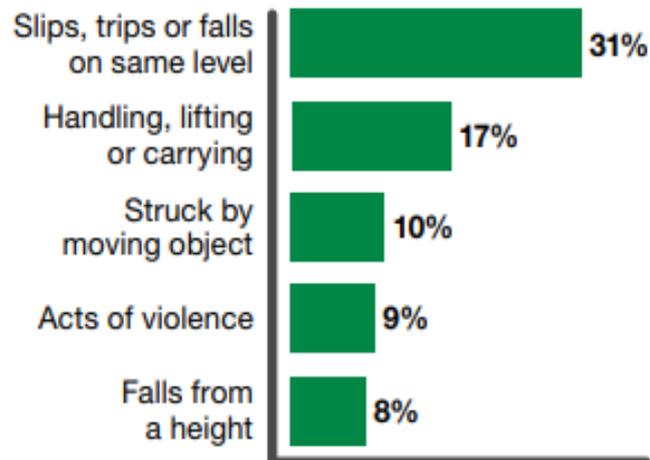
In dental practices, staff are particularly at risk due to prolonged static postures, repetitive hand movements, and the need to lift or move equipment and patients.

## Musculoskeletal disorders by affected area, 2023/2024

Work-related musculoskeletal disorders by affected area, 2023/24



Employee work-related non-fatal injuries reported by employers by most common accident kinds, 2023/24



Preventive measures are often simple and cost-effective and the Care Quality Commission state that each dental practice should have a manual handling policy in place and all employees should undergo training in risk assessment of manual handling and safe manual handling practises.

### Definition

***"Manual handling is the moving of items either by lifting, lowering, carrying, pushing or pulling."***<sup>1</sup>



The weight of the item is an important factor, but many other factors can create a risk of injury, for example the number of times you have to pick up or carry an item, the distance you are carrying it, where you are picking it up from or putting it down (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 adopt while doing a task.<sup>3</sup>

## Legislation

The Manual Handling Operations Regulations 1992 came into force on 1st January 1993 and were amended in 2002. They provide guidance to employers to protect employees from risk of injury when performing manual handling tasks by providing information about avoiding, assessing, and reducing the risk of injury from manual handling.<sup>4</sup> They state that it is the employee's responsibility to make full and proper use of any system put into place by the employer to comply with these regulations. Therefore, these regulations apply to everyone working in dental practice.<sup>1</sup>

These regulations require **employers** to:

**Avoid** - the need for hazardous manual handling, as far as is practicable.

**Assess** - the risk of injury from any hazardous manual handling that cannot be avoided.

**Reduce** - the risk of injury from hazardous manual handling, as far as is practicable.<sup>1</sup>

These regulations require the **employees** to:

1. Follow systems that are put into place in the dental practice to protect their safety.
2. Use any equipment provided for their safety properly.
3. Cooperate with their employer on health and safety matters.
4. Inform their employer if they identify any hazardous handling activities.
5. Take care to make sure their activities do not put others at risk.<sup>1</sup>

**Other legislation that may also have some relevance is:**

- Health and Safety at Work etc Act 1974 (HSWA).
- Management of Health and Safety at Work Regulations 1999.
- Provision and Use of Work Equipment Regulations 1998 (PUWER).
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

## Brexit

As the United Kingdom has now left the European Union and the transition period has ended, the UK Health and Safety Executive has stated that it will only make minor changes to health and safety law and a significant part of that will simply involve removing EU references in its regulations. The key legal requirements will remain the same.

## Risk Assessment



Risk assessment is about controlling the risks in the workplace by thinking about what may cause harm to people and taking reasonable steps to prevent that harm. A policy should be put into place to help communicate and manage any risks and this should be reviewed on a regular basis by everyone in the team.<sup>5</sup> A link to manual handling policy can be found at the end of the article under further reading.

### Assessment Checklist <sup>1</sup>

Problems to consider when making an assessment	Ways of reducing the risk of injury
<p>Does the task involve:</p> <ul style="list-style-type: none"> <li>➤ holding loads away from the body?</li> <li>➤ twisting, stooping or reaching upwards?</li> <li>➤ large vertical movement?</li> <li>➤ long carrying distances?</li> <li>➤ strenuous pushing or pulling?</li> </ul>	<p>Can you?</p> <ul style="list-style-type: none"> <li>➤ use a lifting aid?</li> <li>➤ reduce the amount of twisting and stooping?</li> <li>➤ avoid lifting from floor level or above shoulder height, especially heavy loads?</li> <li>➤ reduce carrying distances?</li> <li>➤ push rather than pull?</li> </ul>
<p>Are the loads?</p> <ul style="list-style-type: none"> <li>➤ heavy or bulky?</li> <li>➤ difficult to grasp?</li> <li>➤ harmful, e.g., sharp, or hot?</li> <li>➤ awkwardly stacked?</li> <li>➤ too large for the person to see over?</li> </ul>	<p>Can you make the load?</p> <ul style="list-style-type: none"> <li>➤ lighter or less bulky?</li> <li>➤ easier to grasp?</li> <li>➤ more stable?</li> <li>➤ evenly stacked?</li> <li>➤ If the load comes in from elsewhere, have you asked the supplier to help, e.g. by providing handles or smaller packages?</li> </ul>
<p>Working environment are there:</p> <ul style="list-style-type: none"> <li>➤ restrictions on posture?</li> <li>➤ bumpy, obstructed, or slippery floors?</li> <li>➤ variations in floor levels?</li> <li>➤ hot/cold/humid conditions?</li> <li>➤ gusts of wind or other strong air movements?</li> </ul>	<p>Can you?</p> <ul style="list-style-type: none"> <li>➤ remove obstructions to free movement?</li> <li>➤ provide better flooring?</li> <li>➤ avoid steps and steep ramps?</li> <li>➤ prevent extremes of hot and cold?</li> <li>➤ improve lighting?</li> </ul>

<ul style="list-style-type: none"> <li>➤ poor lighting conditions?</li> <li>➤ restrictions on movements from clothes or personal protective equipment (PPE)?</li> </ul>	<ul style="list-style-type: none"> <li>➤ provide protective clothing or PPE that is less restrictive?</li> <li>➤ ensure your employees' clothing and footwear is suitable for their work?</li> </ul>
<p><b>Can one person perform the task? Or does the task:</b></p> <ul style="list-style-type: none"> <li>➤ require unusual capability, e.g., above average strength or agility?</li> <li>➤ endanger those with a health problem or learning/ physical disability?</li> <li>➤ endanger pregnant women?</li> <li>➤ call for special information or training?</li> </ul>	<p><b>Can you?</b></p> <ul style="list-style-type: none"> <li>➤ pay particular attention to those who have a physical weakness?</li> <li>➤ take extra care of pregnant workers?</li> <li>➤ provide more information, e.g., about the range of tasks they are likely to face?</li> <li>➤ provide more training (see 'What about training?')</li> <li>➤ get advice from an occupational health advisor if you need to?</li> </ul>
<p><b>Handling aids and equipment:</b></p> <ul style="list-style-type: none"> <li>➤ is the device the correct type for the job?</li> <li>➤ is it well maintained?</li> <li>➤ are the wheels on the device suited to the floor surface?</li> <li>➤ do the wheels run freely?</li> <li>➤ is the handle height between the waist and shoulders?</li> <li>➤ are the handle grips in good condition and comfortable?</li> <li>➤ are there any brakes? If so, do they work?</li> </ul>	<p><b>Can you?</b></p> <ul style="list-style-type: none"> <li>➤ provide equipment that is more suitable for the task?</li> <li>➤ carry out planned preventive maintenance to prevent problems?</li> <li>➤ change the wheels, tyres and/or flooring so that equipment moves easily?</li> <li>➤ provide better handles and handle grips?</li> <li>➤ make the brakes easier to use, reliable and effective?</li> </ul>
<p><b>Work organisation factors:</b></p> <ul style="list-style-type: none"> <li>➤ is there poor communication between managers and employees?</li> </ul>	<p><b>Can you?</b></p> <ul style="list-style-type: none"> <li>➤ provide better training and information?</li> </ul>

## Training

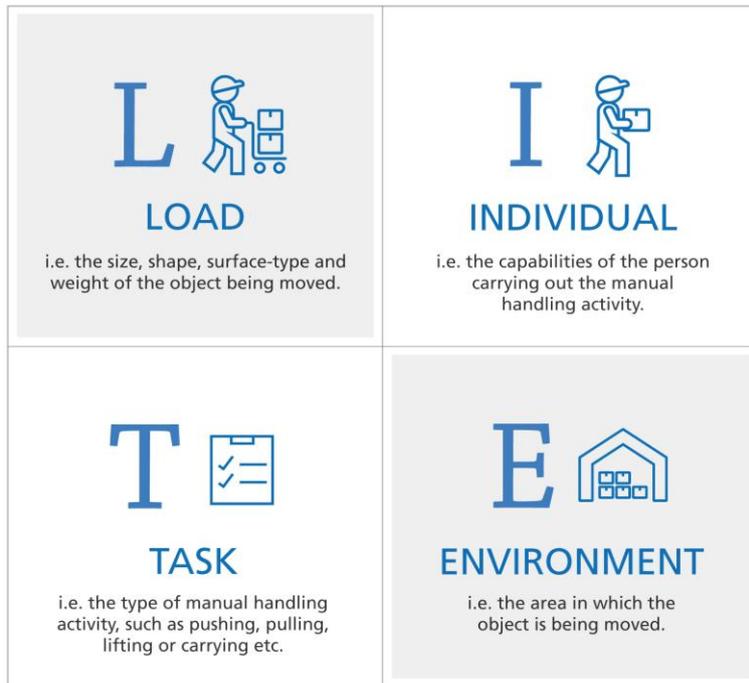


In the dental practice the team should undergo training in manual handling. The training should entail:

- Manual handling risk factors and how injuries can occur (the assessment checklist could be discussed at a practice meeting to cover these points).
- How to carry out safe manual handling, including good handling technique.

- How to use mechanical aids (If any are available).
- Practical demonstration and practise can identify any unsafe handling.<sup>1</sup>

**LITE** is an acronym that aims to help you carry out a manual handling risk assessment. **LITE** prompts you to consider each essential area of the activity in order to improve health and safety. In terms of manual handling, the **LITE** acronym stands for **L**oad, **I**ndividual, **T**ask and **E**nvironment:<sup>6</sup>



### The Stages of a Good handling technique for lifting

In dental practice staff frequently have to lift stock or supplies and should consider the following:

**Think before handling/lifting.** Plan the lift/handling activity. Where is the load going to be placed? Use suitable handling aids where possible. Will you need help with the load? Remove obstructions, like discarded wrapping materials. For long lifts, for example from floor to shoulder height, think about resting the load mid-way on a table or bench to change grip.



**Keep the load close to your waist** for as long as possible while lifting. Keep the heaviest side of the load next to your body. If you can't get close to the load, try to slide it towards your body before you try to lift it.

**Adopt a stable position.** Your feet should be apart with one leg in front of the other (alongside the load if it is on the ground) to increase stability. You should be prepared to move your feet during the lift to keep a stable posture. Wearing overtight clothing or unsuitable footwear may make this difficult.



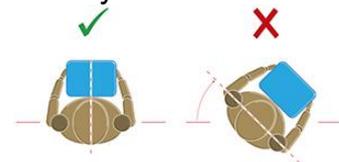
**Ensure a good hold on the load.** Where possible, hug the load as close as possible to your body. This may be better than gripping it tightly with just your hands.

**Slight bending of your back, hips and knees** at the start of the lift is preferable to either fully flexing your back (stooping) or fully flexing your hips and knees (full/deep squatting).



**Don't flex your back any further while lifting.** This can happen if your legs begin to straighten before you start to raise the load.

**Avoid twisting your back or leaning sideways** especially while your back is bent. Keep your shoulders level and facing in the same direction as your hips. Turning by moving your feet is better than twisting and lifting at the same time.

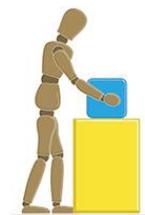


**Keep your head up when handling.** Look ahead not down at the load once it is held securely.

**Move smoothly.** Do not jerk or snatch the load as this can make it harder to keep control and can increase the risk of injury.

**Don't lift or handle more than you can easily manage.** There is a difference between what people are able to lift and what they can safely lift. If in doubt, seek advice or get help.

**Put down, then adjust.** If you need to precisely position the load, put it down first, then slide it into the desired position.<sup>6</sup>



## Pushing and Pulling

Pushing and pulling of loads is not as common in dental practice as lifting. Points to consider if you are moving a load in this way are:

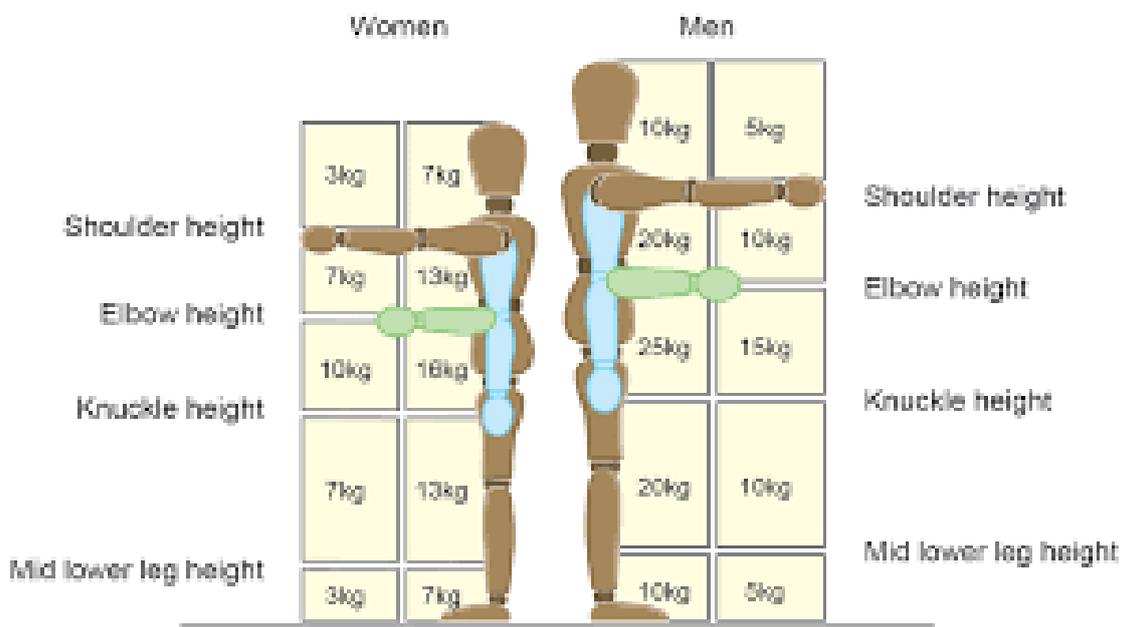
- Trolleys should have handles that are at a height between shoulder and waist.
- Equipment should be well maintained.
- Consider whether it is best to push or pull?
- Do you have to negotiate a slope? Do you need help?

- Think about uneven surfaces.
- Consider your posture, and don't attempt a speed of more than walking.<sup>1</sup>

### Simple Filters

The Manual Handling Regulations do not set specific weight limits, so the guidelines are not 'safe limits' for lifting and carrying. They use broad assumptions or generalisations where, if met, the risk of injury is considered to be low. But working outside the limits is likely to increase the risk of injury, which can lead to ill health. The guidelines are derived from lifting capacity data which show differences between men and women in the population (not individuals).

If the handling task falls within the filter guidelines, you would normally not need to do any other form of risk assessment, unless you feel an individual may be at significant risk then you should complete a risk assessment.<sup>1</sup>



**Lifting and lowering:** Consider if you need to make a more detailed assessment. If:

- The handling operation must take place with the hands outside the zones in Figure 1.
- The weight exceeds those in Figure 1.
- The handling involves torso twisting.
- The handling is more frequent than one lift every two minutes.
- The handling is done by a team.
- The handling operations are complex, for example, the weights vary significantly or there are several start and finish locations.
- The lift does not meet the conditions given for using the guidelines, for example, if the load is difficult to grasp or handle.
- The person lifting may be at significant risk, for example, new or expectant mothers, young workers, those new to the job, or those with a disability, significant health problem or recent injury.<sup>1</sup>

**Carrying risk filter:** You can apply the filter weights for lifting and lowering if the load is:

- Held against the body.
- Carried no further than 10 meters without resting.
- Does not prevent walking normally.
- Does not obstruct the individual's view.
- Does not require the hands to be held below knuckle height or much above elbow height.
- If the load is carried securely at shoulder height without lifting it first the filter value can be up to 20 meters.<sup>1</sup>

### **Pushing and pulling risk filter**

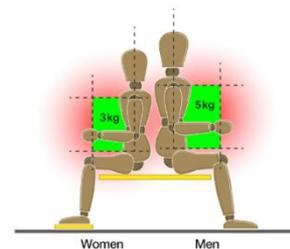
In pushing and pulling actions the load must be slid, rolled, or moved on wheels. The task is considered low risk if:

- Force is applied with hands.
- The torso is upright and not twisted.
- Hands are between hip and shoulder height.
- Distanced moved is no more than 20 meters without stopping.

If the task requires significant force or uneven surfaces/slopes/floors a risk assessment should be completed.<sup>1</sup>

### **Handling while seated**

Filter values for handling while seated are men 5kg and women 3kg if the lift is two handed and the hands remain in the green zone. If the hands extend the green zone an assessment should be completed.<sup>1</sup>



### **Helping Patients to Move**

Where possible patients should be encouraged to move independently, using their own equipment if necessary or using the arms of a chair. Where this is not possible, patient handling should only be undertaken by a team member that has had specialised training in patient handling and is suitably indemnified.

### **Patient assessment & communication**

Do a quick mobility assessment (can the patient weight-bear? balance?) and ask the patient what they can manage. If in doubt, stop and use equipment or call for assistance. Communicate each step to the patient so they can help when safe to do so.<sup>7</sup>

Example checklist for a safe transfer (use in practice)

1. Assess mobility & need for equipment.
2. Clear floor and lock wheelchair/chair wheels.

3. Position chair so transfer is straight-forward (no twisting).
4. Stand so any load will be close to your body.
5. Use a sliding board or sit-to-stand if indicated.
6. Move slowly, coordinate count with team members (“1-2-3 lift”), stop if any pain or instability.
7. Record the transfer in patient notes if it was complex or needed equipment.<sup>6</sup>

### Summary table

Category	Examples in Dental Practice	Key Risks	Safe Practice/Control Measures
<b>Patient Handling</b>	<p>Assisting patients onto/off the dental chair</p> <p>Transferring from wheelchair</p> <p>Supporting elderly or disabled patients</p>	<p>Back strain</p> <p>Shoulder injury</p> <p>Patient fall</p>	<p>Carry out risk assessment before lifting</p> <p>Use mechanical aids (hoist, slide board, transfer belt)</p> <p>Two-person lifts where required</p> <p>Keep load close, avoid twisting</p>
<b>Equipment Movement</b>	<p>Moving dental chairs, delivery units, compressors, cylinders</p>	<p>Musculoskeletal injury</p> <p>Crush/trap injuries</p>	<p>Use trolleys or wheeled bases</p> <p>Get assistance for heavy items</p> <p>Plan route, clear obstacles</p>
<b>Clinical Consumables &amp; Stock</b>	<p>Lifting boxes of materials, water bottles, or stock deliveries</p>	<p>Lower back strain</p> <p>Overreaching</p>	<p>Store heavier items at waist height</p> <p>Use step stool for high shelves</p> <p>Lift between mid-thigh and shoulder height</p>

<b>Chairside Assistance</b>	Passing instruments, repositioning equipment	Static posture strain Awkward reach	Adjust chair and working height  Maintain neutral spine posture  Alternate tasks regularly
<b>Administrative Tasks</b>	Moving files, archives, stationery	Minor lifting strain	Use filing trolleys  Avoid overloading boxes
<b>Training &amp; Assessment</b>	Induction, refresher training	Lack of awareness	Provide annual manual handling training  Review and record risk assessments

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### **Personal Development Plan and Reflective Learning**

This CPD is linked to the following GDC Enhanced CPD Development Outcome:

**B. Effective management of self, and effective management of others or effective work with others in the dental team, in the interests of patients at all times; providing constructive leadership where appropriate.**

Reflective learning is now a requirement of the GDC Enhanced Professional Development Scheme. As such, you will now be given the opportunity to answer some reflective learning questions, before your certificate is generated. These will be:

- 1) What did you learn (or confirm) from the activity that was helpful or relevant to your daily work and patients?
- 2) Comment on any changes/updates needed in your daily work
- 3) How has completion of this CPD article benefitted your work as a DCP?

Examples will be provided. You will have the option to fill this in on completion of the exam, but you can also update this at any time from your CPD log. If you take a few moments to write your reflection on completion, you will have fulfilled the Enhanced CPD requirements.

#### **Further Reading**

[Manual Handling Risk Assessment](#)

[Manual Handling Charts](#)

## References

1. Safety Executive (2020) Manual Handling at Work. Available at: <http://www.hse.gov.uk/pubns/indg143.htm> (accessed 22/10/2025).
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