

Back pain management programme

Lifting

Lifting is often very difficult for people with back pain, as it can cause abnormal strains on joints, causing further pain.

What is lifting?

The definition of lifting is: '**Moving** an **object** from one **place** to another'.

The object can be of any weight from a pen to a sofa.

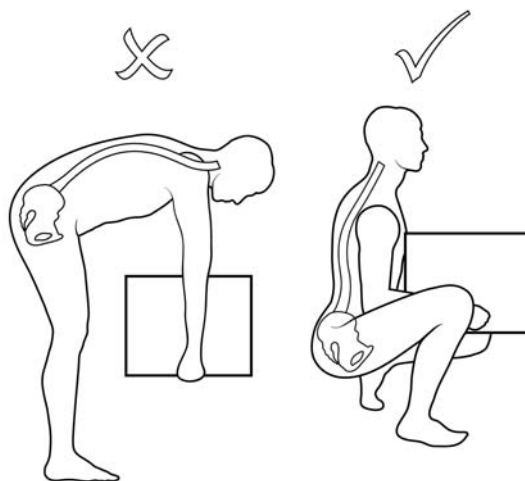
Moving, such as raising, lowering or keeping an object at the same height are all types of lifting. It is moving the object that is important.

Some things are obviously easier to lift than others. Dangers occur when:

- the object to be lifted is too heavy
- the object is in an awkward position
- the object is of an awkward or unpredictable shape or has to be moved repeatedly
- bad lifting techniques are used.

How heavy an object can you lift?

There are guidelines on acceptable amounts to lift for men and women; these depend on the height the object is being lifted from. Notice from the diagram overleaf that as the height of the object to be lifted changes from waist height, the amount lifted decreases. Therefore, the same weight that can be lifted from the floor as from head height. Please also note that if an object is to be lifted to floor height, the recommended weight becomes the floor height amount.



How do I know if there is a risk of injury?

It is a matter of judgment in each case, but there are certain things to look out for, such as puffing and sweating, excessive fatigue, bad posture, cramped work areas, awkward or heavy loads or a history of back trouble.

General risk assessment guidelines

There is no such thing as a completely 'safe' manual handling operation. But working within the following guidelines will cut the risk and reduce the need for a more detailed assessment.

The diagram serves only as a guideline; the amount you can lift depends very much on your body and your experience of what you have lifted before.

Things to consider prior to lifting

Assess

This is the first thing to do: assess the tasks, what needs to be moved where, does it even need to be moved in the first place?

Environment

Is there space to move the object, are there things in the way that you could trip on?

Weight

Is the object too heavy for you? Will you need one or more people to help, would any equipment help, for example a trolley, can the object be divided to make it lighter?

Moved

Can the object more easily be walked / pushed / pulled, i.e. does it need to be lifted? These alternatives are safer.

Stages

Would it be better to move the object in stages?

Plan

From the considerations above you should have developed a plan of how you are going to move the object. Co-ordinate this plan with anyone else involved in the lifting.

Why we lift incorrectly

Most people lift incorrectly. There are a few reasons for this:

- They have never been taught how to lift correctly. They copy other people.
- It seems faster and easier. It seems less effort to bend down from the waist than to squat, it is quicker to twist than to step around.
- It has become a bad habit, which is difficult to break.

- Their legs are too weak and wobbly to enable them to squat down.
- Their knees or hips hurt when squatting; there are alternative ways to getting down keeping the back straight?

Which muscles should I use?

Your leg muscles are large and have evolved to provide power and strength (think of the size of your hip and knee). Your back muscles are much finer and should be used for balance and stability, **not** for power (the size of your vertebrae is roughly equivalent to the size of your wrist). Therefore, when lifting, you must bend at the knees to use the powerful muscles of the legs to take the strain, hence protecting the back.

Principles of lifting

Back Curves - keep them! These are designed to act as shock absorbers and if kept in neutral, minimise the amount of strain and stress you put through the joints. Do not try to keep your back straight, as this will cause loss of balance and/or excessive knee flexion. Brace your abdominal muscles at the start of the operation to support your spine.

Bend knees. This enables you to get down to the object while keeping the curves. Use your leg muscles to lift or lower the object, not your back. Be careful, however, not to over bend your knees as this will reduce the effect your thigh muscles can exert.

Elbows in. This keeps the object close and central, preventing it from acting as a 'long lever' thereby increasing the required force.

Hand hold. Make sure you have a good grip, preferably with the object being balanced.

Foot position. A wide base of support gives you good balance, as do sensible shoes! Place your feet as close to the load as possible.

The head. Lead with your head; raising your head at the start of a lift automatically straightens your back.

Turning. Do not twist from your feet, step around. Twisting is one of the worst movements for your back.

Speed. Take your time, do not rush, avoid jerky movements and if something is too much after all, abandon the lift and make alternative plans.

How should I put things down?

This is the exact reverse of the principles of lifting described above.

- Stand close to where you are going to put it down, keeping your feet wide apart.
- Lower the object, bending your knees and keeping the curves in your back.
- Keep the object as close to your body as possible, letting the forearms take the weight, and release the object gently in place.

How much strain will be on the spine?

Be aware that whatever weight of object you are picking up, the actual strain on the base of the spine is 15 times greater than the weight of the object. This means that even small objects like clothes can cause strain to an already weakened spine if they are continually lifted badly.

What should I do when shopping?

Try and distribute the load evenly in two bags, one on each side of your body rather than on one side. This is to avoid side bending. Make sure you do not overload the bags. Where possible, use trolleys of the appropriate height. Try and avoid deep trolleys at the supermarket as this necessitates bending to reach the bottom. Many places offer a service to help pack or even deliver if necessary. More frequent shopping trips are better than one big shop.

How should I carry one case?

If you **must** carry just one case, such as a briefcase to work, then try to change arms frequently to prevent too much strain on one side of your body. Do not overload your bag and consider a rucksack if possible. Many suitcases also have wheels and handles, but please bear in mind that there is still a strain on the spine from the pulling and twisting component required by their use.