



YOUR GUIDE TO SAFE LIFTING

MUSCULOSKELETAL

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Introduction

Please take note of the following before starting any of the exercises in this guide:

- The intention of this guide is to provide you with advice and exercises which can be done both at work and at home.
- This guide is based on the latest research in this field and contains the best advice available to the best of our knowledge.
- The exercises in this guide are general stretching and strengthening exercises that can be done both at work and at home. However, if you suffer from any current condition it is important to seek medical advice before starting any of the exercises within this pack.
- If consulting a health professional because of any other injuries, it is wise to take this guide with you to show them and ensure that you are doing the right exercises for your particular condition.
- It is important not to disregard medical advice given or delay in seeking advice because of something that you have read in this guide.

What is manual handling?

Manual handling is defined by the Manual Handling Operations Regulations 1992 (as amended in 2002) as:

“Any transporting or supporting of a load including; the lifting, putting down, pushing, pulling, carrying or moving thereof, by hand or bodily force”

Manual handling injuries can occur both at work and at home. Heavy manual labour, awkward postures, handling manual materials and previous or existing injuries are all risk factors that can result in the development of musculoskeletal injuries (i.e. injuries to joints, ligaments, muscles etc) such as back injuries which are a major cause of occupational ill health in the UK.

The health and safety commission see

the prevention of these manual handling injuries as a priority within the workplace. In order for this to happen, it is important that certain actions are taken by both the employer and the employee to ensure that manual handling injuries are limited. Nearly all jobs involve some form of manual handling that includes lifting, pushing, pulling, carrying etc. However not all manual handling involves heavy tasks, and it is often the poor techniques that are used in executing a task that result in injury, no matter what the weight of the object being handled. Since it is not always possible to eliminate all injuries, it is essential that you are aware of the importance of early reporting of injuries that occur in the workplace so that the appropriate actions can be taken and treatment provided.

What should you consider before performing a manual handling task?

You should consider some basic factors before performing manual handling tasks. Those factors can be categorised as the following:

TASK

- Is it necessary?
- How frequent is the task?
- Is it repetitive?
- Where is the load going?
- What route will you take? - shortest with least obstructions
- Will the task involve reaching, twisting, bending or stooping?

LOAD

- What is it?
- How heavy is it - do we know?
- What shape is it - is it awkward to carry?
- Is it rigid or will it bend?
- Can it tear or burst?
- Are there lifting instructions?

INDIVIDUAL

- General physique and strength
- Medical conditions (bad back, knees, other illness)
- Expectant or nursing mother (no heavy lifting)
- Fatigue

ENVIRONMENT

- Floor surface - is it slippery or uneven?
- Are there constraints on posture? e.g. height limitations
- Temperature
- Lighting
- Obstructions (including people)

Guidance for manual handling

PLAN TO PREVENT INJURY

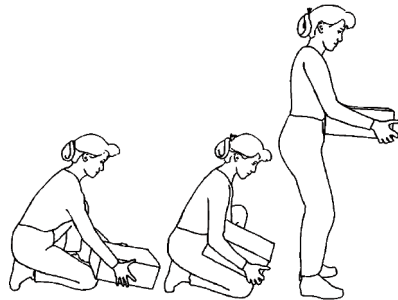
Anyone who is going to perform manual handling should assess the load to determine how it will be handled and where it will be placed. By doing this the risk of overexertion injuries will be minimised.



- Use a trolley when possible
- Break down large or heavy loads
- Seek help if necessary (particularly if the load is more than 25kgs)
- Check your route is clear
- Take extra care with awkward tasks such as emptying a car boot

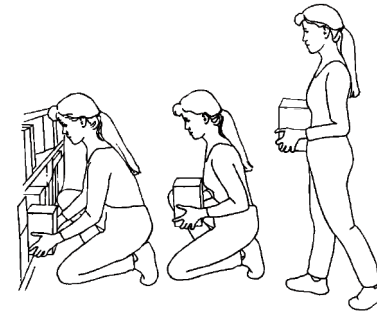
STEPS TO LIFTING THE LOAD SAFELY

Lifting



- Stand close to the load with feet slightly apart
- Position yourself to the corner of the load as you face it front on, to enable you to place one foot firmly on the floor along side the load as you lift it
- Bend your knees, not your back
- Grip the load firmly and keep it close to your body as you lift it. The further it is away from your body, the more pressure there will be on the discs of your spine, no matter what the weight

- Lift with your legs and not your back
- Use two people wherever possible, especially with heavier loads, and make sure that you effectively co-ordinate the lift



Carrying

- Hold it close to your body
- Look where you are walking, and be aware of obstacles that may be in your path
- Take extra care carrying up and down stairs
- Do not twist your body, move your feet to turn

Putting it down carefully

- Bend your knees, but keep your back straight, in the same technique that you used to lift it
- Be careful not to trap your fingers or toes
- Put it down first, then slide it into place
- Do not over-reach or stretch

ABDOMINAL BRACING

Ensuring that you are in a good postural position and contracting your abdominal (stomach) muscles prior to performing a manual handling task such as pushing, pulling or lifting, will provide extra protection and support to your spine and pelvis during the task. A group of stabilising muscles, mainly your transverse abdominus muscle, function as an internal brace. These muscles function automatically when you cough, sneeze and laugh to protect the spine, and can be actively contracted to provide extra protection when performing manual handling tasks.

How to brace?

- Place your index fingers on your hip bones on either side, while standing or sitting in a good posture (i.e. hip bones facing forwards). Move the fingers an inch across and an inch down. Now cough! You should feel the muscle under your fingers tightening.
- Now think about bringing your belly button in towards your spine, but just enough so that you feel a slight contraction of the muscles under your fingers. Try to hold this contraction while still breathing normally.
- You may need to practice this technique before trying to use it actively during a manual handling task.

Note - Brace before doing manual handling tasks!

What can I do to prevent getting a manual handling injury?

- Ensure that you perform tasks in a safe manner using correct manual handling techniques as described previously
- Always use aids that are provided for manual handling tasks such as hoists, trolleys etc
- Always inform your employer if you identify any hazardous handling activities
- Always report any manual handling injury as early as possible so that the appropriate measures can be taken to prevent such an injury in the future and you can receive early treatment for your injury

What exercises can I do?

Strengthening your back and performing general strengthening exercises is an essential part of preventing injuries at work, especially if you are involved in manual work. It is also very important to strengthen your abdominal (stomach) muscles as these are your core stabilisers and will help prevent back injury during heavy lifting or carrying.

Below are some exercises that will help you keep your back stronger and safer. It is important that you are

aware that this is a general strengthening programme which can be adapted depending on information that you have received from your allied health professional or according to your specific injury. If you have more than one injury and are struggling with some of the exercises below because of it, it is important that you consult with your GP or allied health professional so that you can be given alternatives to the exercises that you are unable to do.

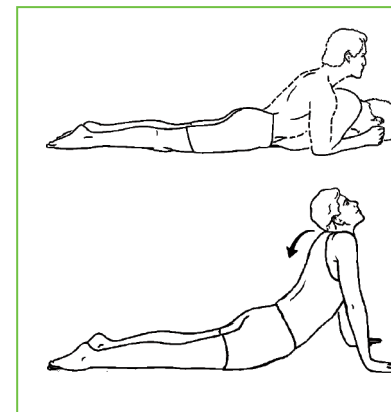
Exercises

- Keep all exercises in your pain-free limits
- If you experience pain during any of the exercises, decrease the intensity of the exercises by:
 - decreasing the number of sets
 - decreasing the number of repetitions
 - decreasing the range of movement
 - decreasing the resistance
- Do all exercises slowly and breathe normally
- Progress gradually according to your own level of comfort
- Following exercise, stiffness or fatigue may result but should not last longer than 24 hours. The symptoms of your injury should not be aggravated

Exercises phase 1

STRETCHES

- Repeat each of these stretches **3 times** (on both sides if necessary)
- Hold each stretch for at least **30 seconds**
- Hold a steady stretch, **do not bounce**



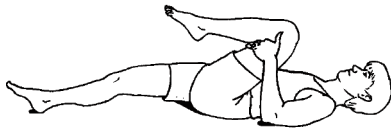
BACK EXTENSION STRETCH

Lying on your stomach, gently come up onto your elbows, keeping hips on the ground. Hold the position for 10 counts. Push up further, putting the pressure on the lower arm, but always ensure that hips are on the ground and only feel a stretch, not pain. Only progress the range as your pain allows. Gently press up, keeping your hips on the ground.

Exercises phase 1

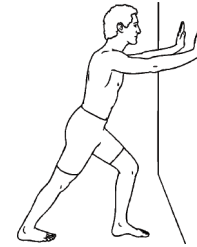
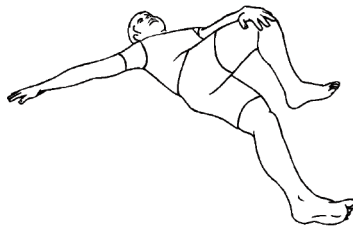
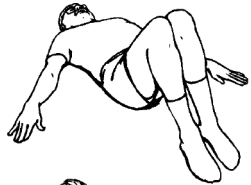
KNEE TO CHEST STRETCH

Pull one knee to your chest in the direction of your opposite shoulder until a comfortable stretch is felt in the lower back and buttocks, while keeping your other leg flat on the ground. Hold for 30 seconds then repeat on the other side. Now take both knees together and hug them close to your chest and hold for 30 seconds.



LOWER TRUNK ROTATION STRETCH

Lie down on your back with your arms outstretched and your knees bent. Gently roll your legs over to one side while keeping your knees together. Hold for 20-30 seconds and then roll over to the other side. If you cannot feel the stretch along your spine, bring your legs up closer to your body. Progress this to raise one leg up and over the other one and then firmly plant the foot of the raised leg on the outside of the knee of the extended leg. Place the opposite hand on the top of the knee. Gently pull your knee across your body, pressing your knee towards the floor. Keep the opposite shoulder on the floor with your arm outstretched and look in the direction of the outstretched hand. Repeat on the opposite side.

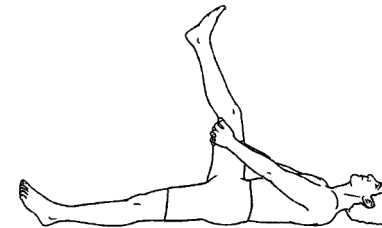


CALF STRETCH:

Stand about a metre away from a wall. Place both hands against the wall with one foot further back than the other. Now lean in towards the wall, bending the front knee and keeping the back knee straight and the heel on the floor.

HAMSTRINGS:

Lying on your back, one leg straight and one knee bent. Raise the bent leg up towards your chest until your knee is in line with your hip. Now straighten the knee. You should feel a stretch at the back of your leg. You can use a towel if necessary to aid you in lifting your leg for the stretch or to enhance your stretch by hooking the towel over your foot and pulling down gently when your leg is outstretched.



BUTTOCKS:

Lay on your back, rest your right ankle on your left knee. Using your hands lift your left leg into the air, bending the knee at 90°. Pull your left leg gently towards your body. You should feel a stretch in the upper back part of your right leg. A towel can be used to aid you in this stretch if you are unable to reach your leg.

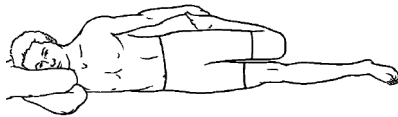


Exercises phase 1 (continued)

QUADRICEPS:

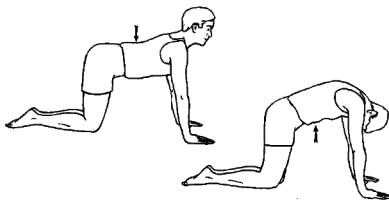
Lying on your right side, your right arm extended up to cushion your head, use your left hand to grasp your left ankle as you bend your left knee backwards. You should feel the

stretch along the front of your thigh. Repeat this twice on your right leg before rolling over to stretch your left leg. It is important to keep the left knee bent but the hip straight as not to hyperextend your back. A towel can be used to aid you in this stretch if you are unable to reach your ankle or bend your knee too far.



CAT CURLS

On all fours breathe out as you let your spine curve inwards, and pull your shoulder blades together. Keep knees directly under your hips and hands under shoulders. Breathe in as you tuck your chin in, and starting at the top, curve your back upwards. Hold each stretch/curl for only 1 or 2 seconds before moving into the next stretch/curl in a controlled manner. Repeat several times.



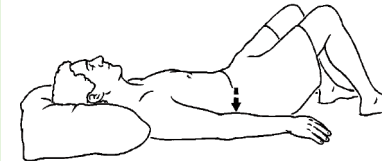
STRENGTH EXERCISE

- Hold each exercise for 5-10 seconds and repeat 10 times
- Remember to continue breathing throughout these exercises
- Ensure that these exercises are pain free in your lower back. If not, it may mean that you are in the wrong position so it is important that you go through them with your physiotherapist

PELVIC STABILITY EXERCISE

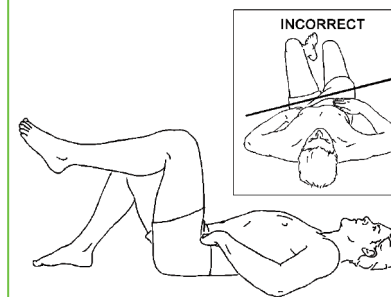
Lying on your back with your knees bent, feet flat on the floor. Place your hands on your hip bones. Flatten your back against the floor and arch your back away from the floor. Now

find a position between these two extremes where your hips should feel like they are facing the ceiling. Maintaining this position, pull your belly button towards your spine so that you feel the muscle under your fingers (just inside your hip bones) contract. Hold this position for 10 seconds and repeat 10 times. Remember to continue to breathe throughout the contraction.

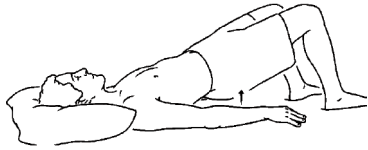


SINGLE LEG LIFT

Lying on your back with your knees bent, pelvis in a neutral position (i.e. hips facing the ceiling) and feet flat on the floor. Pull your belly button in towards your spine and now slowly raise one leg off the floor until your knee is in line with your hip. Your pelvis should be in a neutral position throughout the movement and you should continue to breathe normally. Return to the start position. The movement should be slow and controlled in both directions. Repeat 5 times on each side.



Exercises phase 1 (continued)



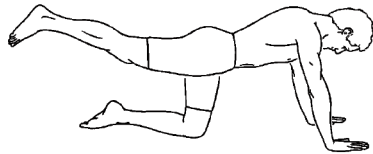
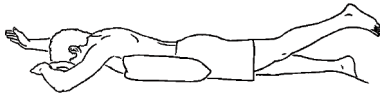
BRIDGING

Lying on your back, with your pelvis in a neutral position and lower stomach muscles, or transverse abdominals (TA) contracted (pull belly button to spine), slowly raise buttocks from floor, keeping your pelvis stable and body in a straight line.



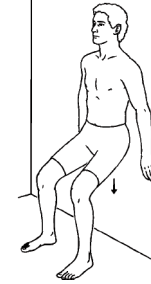
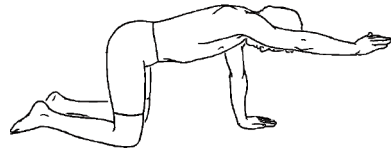
GLUTEAL SETS

Lying on your stomach, tighten buttocks while keeping your belly button in towards your spine. Continue breathing throughout the contraction. Progress this by raising a leg slowly up behind you. You should feel this in your buttock, not your lower back.



HIP AND ARM EXTENSIONS

On all fours ensure that hands are under shoulders, knees under hips and back flat i.e. table top position. Now pull your belly button towards your spine, without moving your back and slowly move one leg out behind you in the air. Hold for 10 seconds and relax. Now try the same with your arm, hold for 10 seconds and relax. Repeat 5-10 times on each arm and leg.



WALL SLIDES

Stand leaning up against a wall, your feet a little away from the wall and pointing slightly outwards. Push your back against the wall. Slowly lower your body into a seated position and hold this position for 5-10 seconds. Complete 10 repetitions.

Exercises phase 2

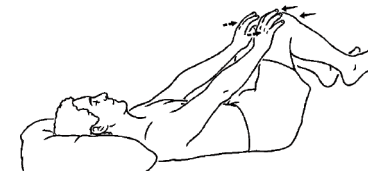
Start this phase once you are able to complete the exercises in phase 1 comfortably and without pain.

Continue with the stretching exercises in phase 1 as well.

STRENGTH EXERCISE

- Do 3 Sets of 10 and hold each position for 5-10 seconds unless otherwise stated in the exercise

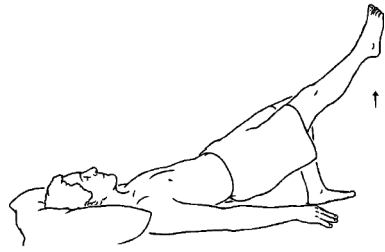
- Always work in a pain free range of movement



PUSH/PULL EXERCISE

Lying on your back, bend your knees so that your feet are off the floor. Attempt to bring your knees up to your chest, but resist the movement with your hands i.e. push your knees away from your chest. Repeat 10 times. Now in the same position, you will use your hands to pull your knees to your chest, but resist the motion with your legs i.e. push your legs out against the motion of your hands. Repeat 10 times.

Exercises phase 2 (continued)

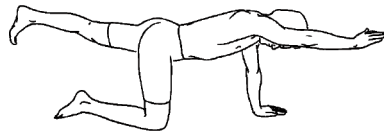


BRIDGING WITH ONE LEG EXTENDED

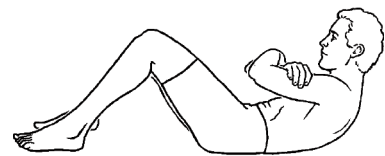
Lying on your back, bend both knees to 90° with your feet flat on the floor. Tighten TA and lift your pelvis and lower back off the floor. Now lift one foot off the floor and straighten your leg while still keeping your knees together. Hold for 5 seconds, put it back down, repeat with the other foot, and then relax completely. Begin again. Keep the TA and buttock muscles tight throughout the movement to keep the pelvis stable without dropping to one side. Repeat 5 times per leg.

ALTERNATIVE ARM AND LEG EXTENSION ON ALL-FOURS

Start in an all four position with your hands under your shoulders, knees under your hips and back flat (table top position). Stabilise in your pelvis

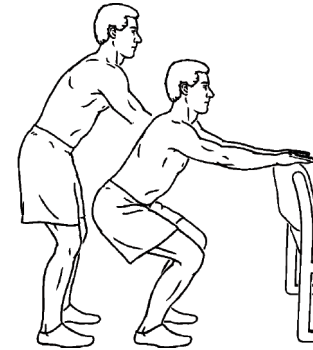


(pull your belly button in towards your spine, without changing your back position). Now raise your opposite arm and leg without moving your hips and keeping your spine in a neutral position. Do not arch neck - keep it in line with your back. Repeat 5 times on each side and hold each for 5-10 seconds. You can also try this over the ball as a progression.



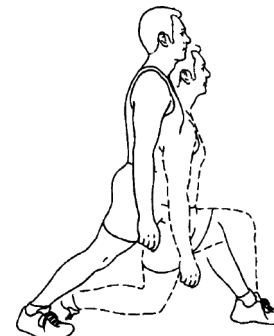
CURL-UP

Keeping arms folded across chest start with your pelvis in a neutral position. Raise head and shoulders from floor, keeping chin tucked in and inline with your body. Ensure the movement is continuous and controlled.



MINI SQUATS

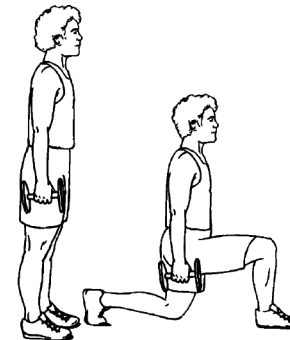
Stand with your feet hip width apart and hold your hands out in front of you. Now bend the knees keeping your feet flat on the floor, and ensure that your knees do not go past a 90° angle and that your back is straight. Return to the starting position. Make sure that both movements are slow and controlled and that your knee goes down straight (no rolling inwards).



LUNGES

Place one foot in front of the other. Bend both knees together until you have a 90° bend in both. Ensure that your front knee does not go over your front foot when bending to 90°. Return to the starting position. Perform 1 set of 10 repetitions per leg (complete all 10 repetitions with the one foot forward before changing and starting with the other leg in front).

Once you can do this pain free, progress onto a stepping lunge, starting with your feet hip width apart, lunging forwards to a 90°/90° position in your legs and then back to the start position. Alternate your leading foot while performing this lunge.



Exercises phase 2 (continued)

STANDING LEG EXERCISES

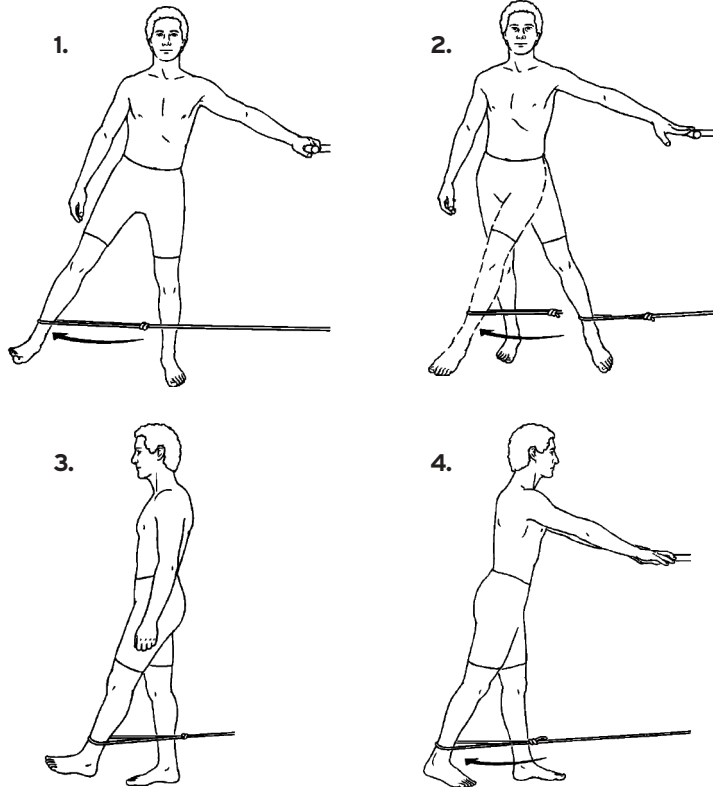
Tie a piece of theraband (elastic) around the leg of a table or bed, and place your foot through the loop. Now perform various movements, ensuring that your pelvis is stable (neutral and TA contracted) and that you are not leaning. Movements back and forth should be done in a slow and controlled manner.

1. Abduction: take your leg away from you

2. Adduction: turn around and bring your leg towards you

3. Hip Flexion: facing away from the table, bring your leg straight out in front of you

4. Hip Extension: face the table and kick your leg backwards keeping a straight knee



Contact us

This guide is designed to assist you in lifting or manual handling safely.

If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

Phone 017890400999 / 07870166861

www.mdphysiotherapy.co.uk

