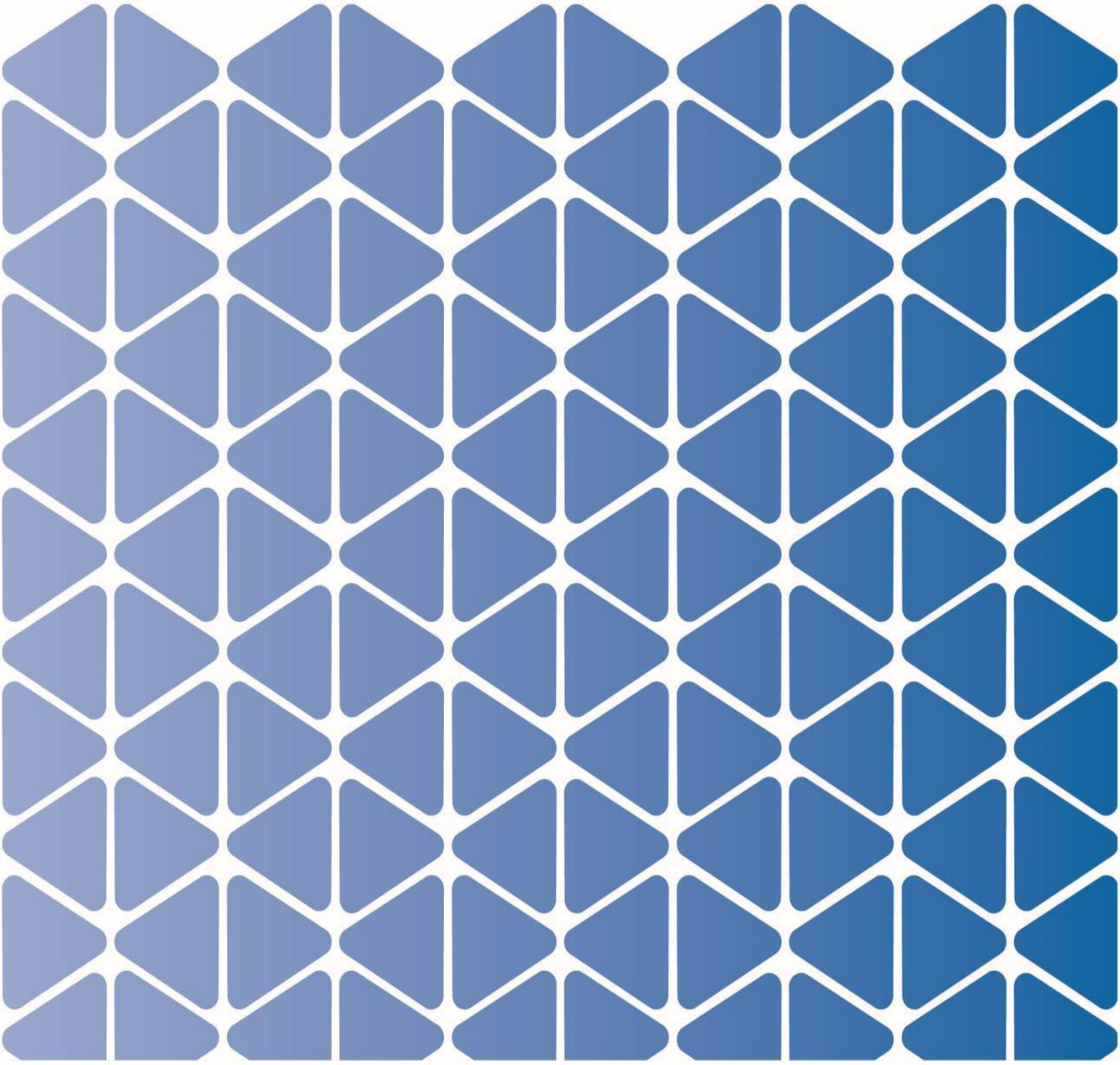
PATIENT INFORMATION

Worcestershire Acute Hospitals NHS Trust

# LOWER BACK PAIN
# A SELF-MANAGEMENT GUIDE



# What is lower back pain?

## Definition of Lower back pain

Lower back pain is defined as tension, soreness, pain, and/or stiffness in the lower back region. Sometimes this can be non-specific with no identifiable structural cause for the pain.

In some instances, there may be a cause such as muscle weakness, tightness, nerve, joint or disc related problems. A physiotherapist can help to identify contributing factors.

Most episodes of back pain will recover in less than six weeks. Back pain lasting longer than this may warrant seeing a physiotherapist for support:

## Acute vs Chronic

- Acute = Less than 6 weeks in duration
- Sub-acute = 6 – 12 weeks in duration
- Chronic = More than 3 months in duration

## Scans

Diagnostic imaging or scans are not always useful.

*One study recently investigated scanning young adult's spines, who all had no pain, and found that 50% of them had changes within their spine (including Osteoarthritis and disc bulges). This means that you can have changes within your spine but still have no symptoms, and that these scans therefore do not always correlate with pain.*

Your clinical history i.e. when and how your pain started, the type of pain you describe, aggravating and easing factors and a physical examination by a clinician is normally sufficient in identifying diagnoses and treatment options. If your clinician feels that further imaging is required, they will identify this and refer you forward to a specialist service.

## Red flags

Red flags are indicators of potentially more serious spinal pathology.

Most people with back pain might have a combination of back and one-sided leg pain, which whilst distressing, does not require emergency medical attention.

**Cauda Equina Syndrome (CES)** is a rare and serious condition affecting the nerves at the bottom of the spine. If untreated this can have severe consequences on lower limb strength, bladder, and bowel function.

If you have back pain and experience a change in intensity or new onset of the below symptoms, then please attend your nearest Emergency Department urgently:

- Bladder or Bowel changes
    - *Loss of control of bowels*
    - *Unable to pass urine (despite needing to)*
- Difficulty walking or change in walking pattern – such as developing inability to lift your foot to clear the floor, catching of feet/foot on the floor compared to the other side, or both.
    - *Increasing weakness in legs*
- Loss/Change of sensation of the inner thighs and/or front or back passage
    - *Numbness of inner thighs*
    - *Pins and needles of inner thighs*
    - *Unable to feel yourself wipe after going to the toilet*
- Sexual dysfunction
    - *Change in ability to initiate an errection*
    - *Loss of sensation in genitals (for example, during sexual intercourse)*

**Any combination or number of these symptoms could indicate CES and should prompt urgent emergency medical attention.**

Spinal Infection can cause lower back pain. This requires urgent treatment. You should be suspicious of this if you have:

- Back pain that is not improving, which may be associated with feeling unwell, fever, chills or general malaise. This may sometimes be alongside new onset of neurological leg symptoms; weakness, altered or loss of sensation.

If you have these symptoms **in combination with any of the following, please attend A&E immediately:**

- You have had a recent surgery
- Recently travelled abroad
- You may be more at risk of spinal infection if you are immunocompromised, using intravenous drugs, have diabetes or have any indwelling devices such as urinary catheters.

**Spinal Fractures** can occur after a trauma, because of osteoporosis or repeated mechanical stress. If you have had any trauma which is followed by persistent worsening pain, attend A&E so that a fracture can be ruled out.

**In all of these scenarios, if you are in doubt about any of your symptoms, always phone 111 for advice who will appropriately advise on if you need to attend A&E.**

**Other factors that can exacerbate low back pain are discussed below:**

## Psych-social factors

1. **Sleep**
   Sleep quality can have a negative impact on lower back pain. Sleep helps boost mood, reduce stress, and manage anxiety which all can have a direct impact on low back pain. Identifying factors that contribute towards poor sleep hygiene can help with improving your quality of sleep.

   **Triggers for poor sleep might be:**
   • Something important on your mind
   • Sleeping in an unfamiliar place
   • Upsetting life events or changes in life circumstances
   • Physical illness or pain
   • Anxiety disorders and depression
   • Worrying about not sleeping - this is known to be the most significant factor in insomnia

   **Things which might help with sleep:**

- Limit caffeine and nicotine before bed – both are stimulants. i.e. Limit caffeine ideally 8 hours prior.
- Limit alcohol before bed. This is a depressant, and though it might induce sleep more quickly, quality of sleep is poorer. High alcohol consumption also raises our blood sugar levels, which can contribute to higher systemic inflammation. The same can be said for high sugar diets.
- Avoid daytime napping if you are struggling to sleep at nighttime. If you feel this is not avoidable, limit naps to 15 minutes. Day napping reduces the natural hormonal drive to sleep at night.
- Create a Sleep/Wake schedule for routine – try to go to sleep and wake at the same time every night.
- Have the right environment to sleep i.e Cool/Dark/Quiet room.
- -Try a ‘wind down routine’ or meditation before sleep.
- Limit use of screens 1 hour prior to bedtime – TV, phones, and laptops.
- Write down anything on your mind and a plan of action in the early evening.

*More advice via NHS every mind matters page: ‘Fall asleep faster and sleep better.’*

## 2. Stress i.e. finances/work/family/relationship/trauma

Stress and anxiety can have a negative impact on your pain and have been shown to predict reoccurrence of low back pain in the future. Stress can also be a trigger for pain.

It is important to recognise triggers for stress and whether any further support is needed to help you reduce this.

Further information and support can be found through these websites by using the QR codes below:



Every Mind Matters
Get Your Mind Plan



Every Mind Matters – Online self-help CBT techniques



Mind.org.uk - Managing stress and building resilience - tips -

If you are still struggling to manage your stress levels or manage feelings of anxiety, you should discuss this with your GP for further support.

**Self-management:**

Prolonged bedrest greater than 1-2 days can be worse for your back, as your muscles will lose strength and flexibility, joints may become stiffer. It is encouraged that you return to normal daily activities as soon as possible and modify these if needed. Consider changes to the duration, frequency or load of a task you are completing.

To make this easier, you could try using pacing as a tool. This is a technique that helps you modify activities, by breaking them down into smaller parts or taking regular rest periods throughout them. For example, a twenty-minute walk could be broken into two 10-minute parts, with a planned rest between. E.g. sitting on a bench for 5 minutes before continuing if this was easing for symptoms.

Any form of physical activity or exercise is good for your back. This should be something you enjoy and are able to continue as part of a healthy lifestyle. Ideas of exercises or activities could be walking, swimming, cycling or exercise classes.

If you are struggling with high impact activities like running, try a lower impact activity like swimming or cycling to begin with and slowly build your exercise tolerance back up.

Suggested exercises are provided on pages 6-22 of this leaflet.

If you feel your pain is stopping you from participating in any forms of exercise, speak with your GP or local pharmacist who can advise on what may help. If you are already taking pain relief and this is not helping, it is important to return to your GP to make them aware of this, and they might prescribe something different or additional.

**Return to work / Normal daily activities**

Many studies show that returning to work early and maintaining an active lifestyle help reduce the persistence of low back pain. It is important for both your physical and psychological well-being to return to work if you have had time off as appropriate. You can discuss with your physiotherapist should you require advice.

## Treatment

Walking is a great starting point for helping back pain. Start off with a few minutes twice a day. Increase walking distances gradually.

Other forms of lower impact exercise may be helpful:

- Swimming or walking in a pool
- Static bike/cycling

## Tips for exercise – how much should I do?

- For these exercises, start with the number of repetitions that feel tolerable for you. Gradually build up to 10, x 2 daily as able.

- It is not uncommon to feel an increase in some symptoms after exercising, this is because your body needs time to build tolerance and to desensitise to load and movement again after experiencing pain or injury.

- It can be useful to use your symptoms as a guide for how much or how long to spend exercising.

  - Aim to keep pain less than or equal to a 3-4/10 (ten being the worst pain, and zero being none).

- Any increase in pain should settle within 30 minutes. If it takes significantly longer, it may help to try exercising for a shorter period next time and increase gradually to build your tolerance.

**Exercises – Try some of these exercise over the next few pages to start getting your back muscles and joints moving. This can help ease stiffness and spasm. Later exercises will focus on regaining strength.**

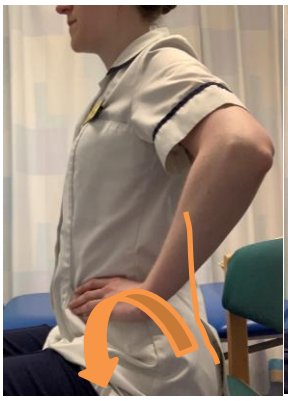
**Early exercises:**

**Pelvic tilts** – Lying on your back in a comfortable place such as your bed or a soft yoga matt on the floor.

Slowly, try to tilt your pelvis forwards as if tipping an imaginary glass of water away from you, arching the lower back. Return to your start position. Next, try to move in the opposite direction, as if flattening the arch in your lower back.

Try this in a seated position if you are not comfortable to lie down. Place your hands on your hips to feel the movement of your pelvis forwards and back.







**Knee hugging -** Lying on your back in a comfortable place such as your bed or a soft yoga matt on the floor. Slowly, bring with one leg up and hug it towards your chest. Hold the stretch as comfortable. Repeat on the opposite leg.

If able, try bringing both knees to your chest for an increased lower back stretch. You can try rocking from side to side in this position as well if easing.





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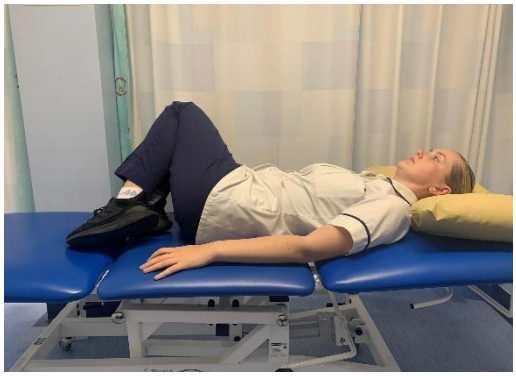
| **Knee rolling -** Lying on your back in a comfortable place such as your bed or a soft yoga matt on the floor. Bend your knees to enable you to plant both feet onto the bed or mat you are lay on. Place your hands by your side, palms facing down. Slowly, roll your knees from side to side. Only move as far as you are comfortable. | <br> | ☐ |
| **Thoracic spine rotation –** In a seated position, cross your hands over your chest. Slowly, turn your upper body round to the left and to the right. Hold the stretch at the end briefly if comfortable. | <br> | ☐ |

**4 point-kneeling thoracic rotation**

On a bed or soft yoga matt, position yourself on your hands and knees. Knees should be under your hips, and wrists under your shoulders.

Thread one hand through underneath you to the opposite side, rotating your spine. If comfortable, rest the shoulder down onto the bed. Hold the stretch if you find this helpful.

Reverse the movement and reach up and back towards the ceiling.
If you don't find this part of the movement is helpful for you, just complete the first two parts. Repeat on your other side.



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| **Pelvic tilts in 4 point-kneeling – 'Cat-cows' –** On a bed or soft yoga matt, position yourself on your hands and knees. Knees should be under your hips, and wrists under your shoulders.<br><br>Slowly, arch and round your back in a controlled manner. Hold each position at the end if it feels easing or comfortable. If you feel pain, only move as far in each direction as comfortable.<br><br>If it is uncomfortable or not possible to place your hands flat to the bed, make a fist instead. Or place a folded towel under the heel of the hand to reduce pressure through the wrist. | <br> ☐ |
| **Standing side flexion –**<br><br>Standing upright, facing a mirror if able. Place your hands on the sides of your legs. Slowly, slide your left hand down your left leg.<br><br>Try not to rotate your body as you do so. Return to the starting position, repeat to your right side.<br><br>If this exercise is not comfortable in standing, you could also try the same movement lying down. |  ☐ |

**Hip muscle stretches –**

Lying on your back in a comfortable place such as your bed or a soft yoga matt on the floor. Bend one knee and with your hand on the opposite side, gently pull the knee over towards the other leg. Hold as comfortable if you feel a stretch.



Repeat, but place your foot onto the opposite knee, let your knee fall out to the side. To increase the stretch, bend up the knee on the opposite side to draw the foot closer towards you. Hold the stretch as comfortable.



**Intermediate exercises:**

**‘Theraband’/Exercise band alternating chest press –**

Stand or sit with an exercise band around your upper back, under the shoulder blades. Start with a light resistance band.

Hold each end of the band in your hands. Slowly, one arm at a time, extend your elbow to straighten the arm up towards shoulder height, pushing against the band. Return to your start position.

Swap arms, repeat alternating left and right. You can progress this exercise by increasing the resistance level of your band.





**Pallof press –** Firmly attach an exercise band to something secure to one side – e.g. stair post. Stand or sit, side-on to where the band is attached. Hold both ends of the band in your hands, elbows bent.

**1.** Ensure you are sat or stood far enough away from the band attachment to have some tension on it.

**2.** Pull the band across to the centre of your body.

**3.** Slowly, press your arms forward away from your body. You may feel the band wants to pull to your side – resist this and maintain a neutral position. Slowly, bend your elbows again returning to the centre of your body.

- If you started the exercise in sitting and found it easy, try to progress it to standing.
- If you started in standing, you could progress to an upright or half kneeling position.





**Abdominal strengthening**

**Alternate leg lifts - Images 1 & 2**

Lying on your back on a firm but comfortable surface such as a yoga mat. Bend up both knees so that your feet are planted into the ground.

Gently, draw in your abdominals, keeping your back flat to the bed. Take a breath in, as your breathe out slowly lift one leg keeping the knee bent. As you inhale again, lower the leg back to the bed. Repeat on your opposite leg.

**Toe taps:**

**If the above feels too easy for you,** try lifting one leg after the other to a 'tabletop position' – knees bent to 90 degrees, feet off the bed. Slowly, tap one foot down to the bed and back up again. Repeat, alternating legs. **(Images 3 & 2)**

Remember to exhale as you lift, and inhale as you lower your leg.



**1**.



**2**.



**3**.

**4-point kneeling arm and leg lifts – 'bird-dog' -** On a bed or soft yoga matt, position yourself on your hands and knees. Knees should be under your hips, and wrists under your shoulders. If it is uncomfortable or not possible to place your hands flat to the bed, make a fist instead. Or place a folded towel under the heel of the hand to reduce pressure through the wrist.



- **Arm lifts only** - align your spine in a neutral position. To start with – lift one arm at a time, slowly and return. You might feel some gentle tension in your tummy muscles as you maintain your trunk position.



- **Leg lifts only** – extend one leg at a time behind you slowly and return. Again, you might feel some gentle tension in your tummy muscles as you maintain a neutral spine. Try not to rotate your body to the opposite side as you lift your leg.



- **Leg and arm lifts** – Slowly lift one arm, as you do so start to lift your opposite leg. Try to maintain your balance and a neutral spine. Slowly lower your leg and arm. Repeat on the opposite side.



**Bridging -** Lying onto your back on a in a comfortable place such as your bed or a soft yoga matt on the floor. Bend your knees to enable you to plant both feet onto the bed or mat you are lying on. Place your hands by your side, palms facing down.

Think about engaging your tummy muscles and drawing in the belly button. Inhale. As you exhale; slowly lift your hips away from the bed, pushing down through your legs, forming a bridge.

Hold briefly, inhale as you slowly relax your back down to the bed again one vertebra at a time.





**Side lying hip abductors strengthening**

Lying on your side, with hips stacked on top of one another, place your upper hand on your hip. Keeping your knee straight, slowly raise the upper leg away from the other. As you do so, try to keep your trunk in alignment. Avoid rotating your body forwards or back.

Repeat this exercise as comfortable. You shoulder feel some light muscle fatigue in your upper buttock. You can repeat this exercise on both legs.

**If you feel you lack stability in your trunk in this exercise, bend the knee of the lower leg as shown in the third image.**

**If you wish to make this exercise harder, try adding in a light exercise band loop around your ankles.**









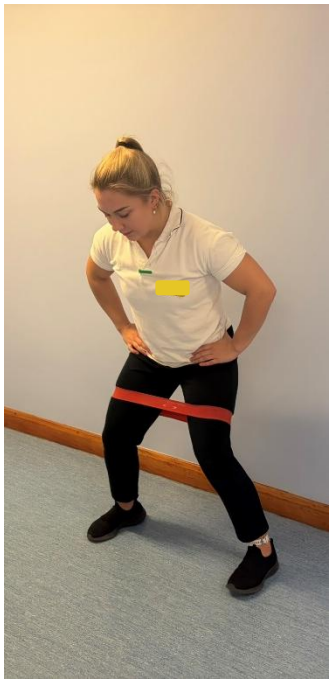
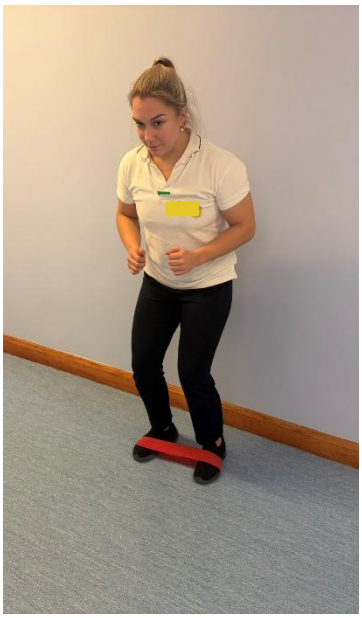
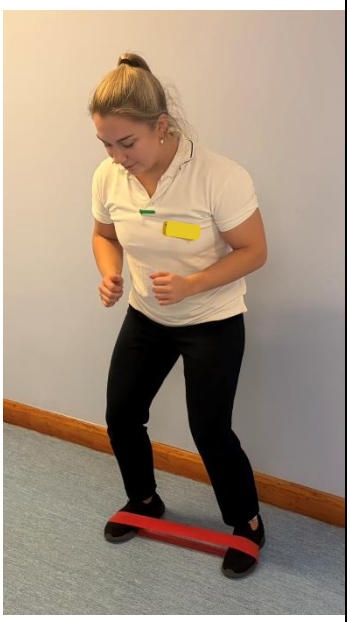
**Lateral glute walks** ☐

Using a looped exercise band, or a length tied securely into a loop. Place it around both legs above your knees. You may wish to sit down when doing so for safety.

Bend slightly at your hips and knees, with a small forwards lean at your trunk.

Take a step out to one side and continue stepping in this direction again the band. Complete both directions.

**To make this harder**, place the band around both feet, as shown in the second images. You should be able to feel this exercise working the muscles at the side of your hips.

**Sit to stands –** Sit on a comfortable but firm chair at a height you feel able to stand and sit from. This might be a higher chair or perched position to start with if you find standing from a lower chair difficult.

Place your arms over your chest, lean your body forwards to look at your toes.

Ensure your feet are underneath or behind your knees. Push through your legs to stand. In a controlled manner, slowly sit back down again by hinging at your hips and sticking your bottom out. Bent at the knees and lower yourself back to the chair.

Repeat as comfortable. Try to build up to 10-12 repetitions before progressing this exercise to a lower chair or adding weight.







**Advanced exercises:** ☐

**Chair squat with load** – Sit on a firm chair with your hips at 90 degrees and feet just behind your knees. Hold a weight which feels comfortable with your elbows bent, close to your chest. Lean forwards at your hips, push up into standing. Slowly, bend at your knees and hips to lower yourself back to the seat again.





**Progression 1:** ☐

If you can hold the position well before sitting back to the chair again, you may wish to progress away from using the chair and squat lower if comfortable.



**Progression 2:** ☐

**Chair squat into standing chest press:**

**Note –** <u>you may wish to use a lighter weight if you feel it is too heavy to move away from your body using your arms.</u>

Once stood with the weight – think about keeping your tummy muscles engaged, straighten your elbows, pressing the weight away from your chest to shoulder height. Bring the weight back towards your chest again, bending your elbows.



**Advanced exercise:** ☐

**Deadlifts -**

This is an excellent exercise for strengthening the lower back, glutes, and hamstring muscles.

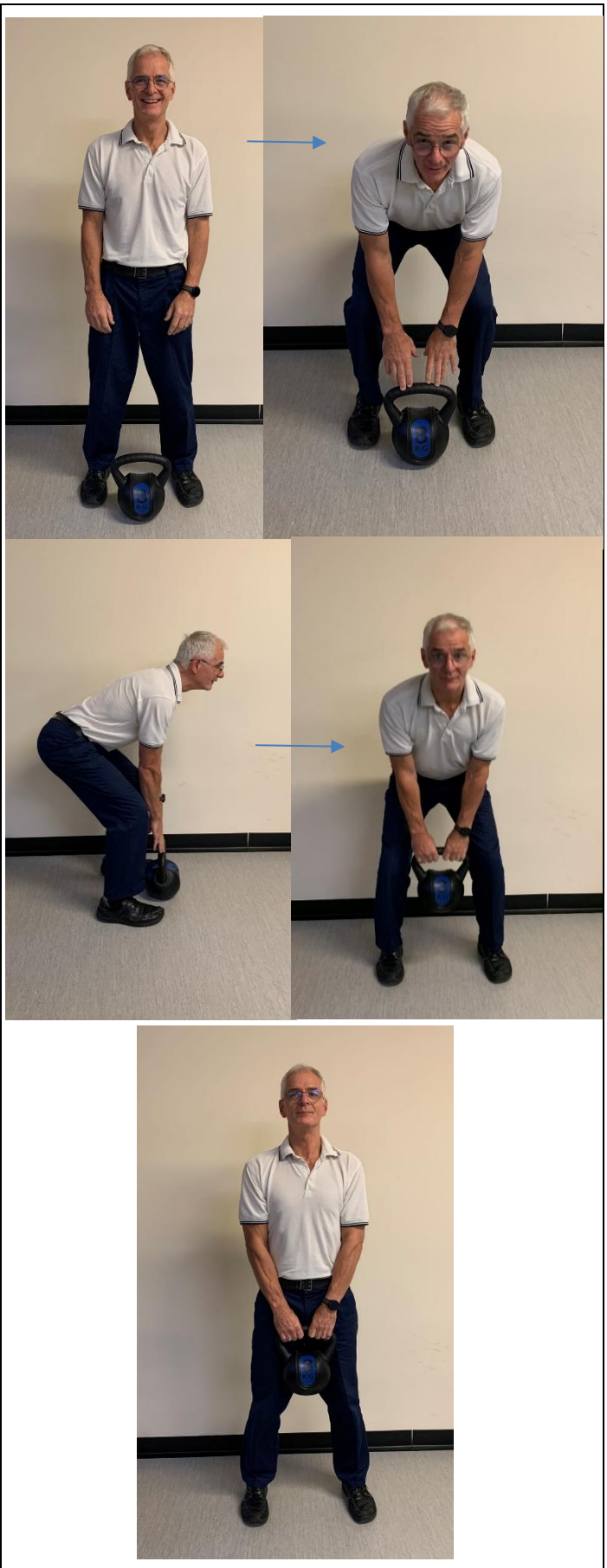
If you have not done this exercise before, start by practising the movement with a walking stick or light broom handle. You can add load to the movement by using a barbell at a gym, handheld weights, or a kettlebell. A personal trainer or physiotherapist can help to coach you through the movement if you are not sure.

Stand over a kettlebell with your feet shoulder-width apart. Bend your knees and push your hips back to reach down and grip the kettlebell using an overhand grip*. Pull your shoulder blades back and down. Drive through your heels, extend your knees, and bring your hips forward to stand up.

When you lift, the kettlebell should travel close to the shins. Maintain a neutral spine position throughout the movement.

***If you feel unable to pick the weight up from the floor, try placing it on a low stool to reduce the range.**





**If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.**

## Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

## Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

## Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

## How to contact PALS:

**Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net**

## Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.