

Managing Musculoskeletal  
Complaints  
**Non-Specific Lower Back Pain**



# NON-SPECIFIC LOWER BACK PAIN

Lower back pain is the main reason people access Physio Med services from our clients. Lower back pain accounts for **40%** of all referrals from our clients.

## Of the lumbar spine patients seen:

Work aggravated: 46%  
Domestic: 41%  
Accidents at work: 12.5%

## Lower back pain background

- Very few people who feel pain in their lower back have a serious medical problem
- 90% of people who experience lower back pain for the first time get better within two weeks
- People who have back pain for longer than two weeks should seek advice from PAL
- Very rarely do people with lower back pain develop chronic back problems

## Key facts

- Back pain is common
- It usually only causes problems for a short period of time
- Normally correct advice and exercises can resolve the problem
- There are pro-active steps you can take to prevent problems

## Symptoms

Most back pain is in the lumbar spine and normally affects one side more than the other.



In some cases the pain may be referred and will go into one leg.



Above is the most common pattern down the back of the leg in the sciatic nerve - what people often call sciatica

In rarer cases the pain affects the front of the leg and the groin/hip area. This is called femoral nerve pain (as seen below)



**If the pain is in the leg, either front or back, seek medical advice immediately. Nerve pain can be very debilitating and should be addressed as quickly as possible!**

## General advice

**Remember**, if you try any of the things below and you feel they make you worse **NOT** better, contact us for individual advice!

Every back problem is different. There are many causes of lower back pain and some may have more than one cause or contributing factor. However most back problems (not all but most) respond well to four things:

### 1. Keep Moving

This works in over **95%** of cases.

Do **NOT** stay in bed all day or sit in a chair for long periods.

Try to change your posture every 20 minutes e.g. if you're sat for 20 mins, stand for one-two minutes before sitting again. If you walk for 20 minutes, stop and sit for a few minutes.

### 2. Heat

This works in over **90%** of cases.

Use a hot water bottle on the affected part of the back for 20 minutes at a time.

### 3. Tablets

If you can't do your daily activities due to the symptoms, take some tablets.

The use of the correct medication works to relieve symptoms in nearly every case.

Use pain killers and/or anti-inflammatories - ask your local pharmacist for advice.

If over the counter medication is ineffective, see your GP for stronger tablets.

### 4. Exercises

Exercises can be used to relieve muscular tension and correct the alignment of the spine.

Simple McKenzie exercises work in over **80%** of cases.

Core stability exercises can stabilise the spine, reducing symptoms and preventing recurrence.

## Physiotherapy treatment

### Mobilisations and manipulation

Some back problems require specific treatments which can be provided by a qualified physiotherapist. Physio Med can offer specific advice on these situations.

### Factors that contribute to back pain

- **Poor posture**

Poor posture damages the structures within the back, causing pain and dysfunction.

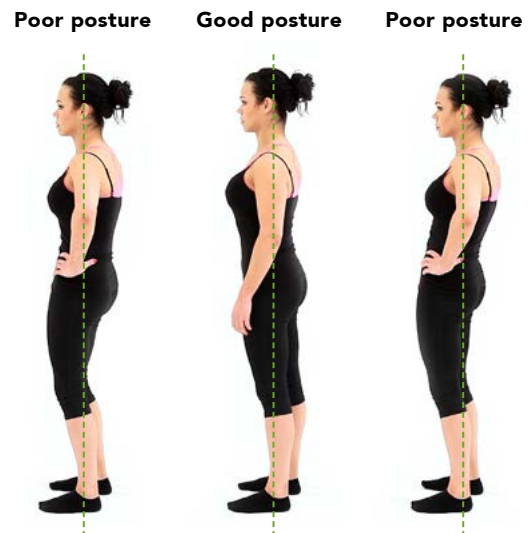
This occurs slowly over time and is often called insidious back pain as there is no specific cause.

### So what is good posture?

Good posture is the term applied when the three spinal curves are maintained with low muscular effort.

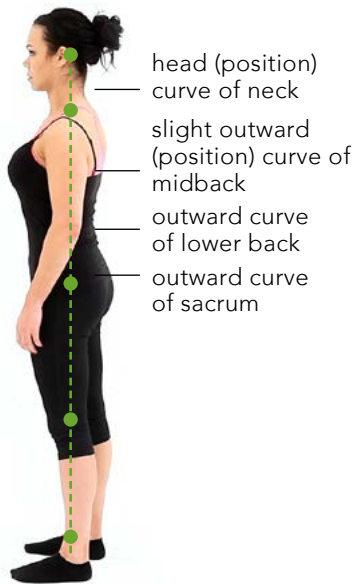
Remember postures are position related!

- **The Standing Posture** - avoid the two main types of poor posture - Sway Back and Flat Back



The pain came on over time, I didn't lift anything.”

- Maintain the three curves with equal weight distribution by keeping your ears, shoulders and hips in a straight line (view from the side).



- If your task involves standing, try to make sure any work surfaces are at the right height for you. You might need to raise or lower the surface. The right height for you is the height at which you would be able to put your hand onto the surface whilst stood upright with a small (15 degree) bend at the elbow.
- Don't break our earlier rule!!! Alter your position regularly so that you don't stand still in one position for longer than 20 minutes.
- Don't stand for long periods in high heels or shoes with little cushioning or support.

• **The Seated Posture** – if you sit unsupported in one position for a few minutes, the lower back muscles fatigue, resulting in a slouched sitting position. This is not good!

**In order to maintain good posture in sitting:**

- Sit with both buttocks on the seat (ensure it is stable and firm).
- Take most of your weight equally through the tail bones of the pelvis.
- Rest your feet easily on the floor and support your low back arch with the chair back or, if that won't fit properly, use an additional cushion / rolled up towel.
- Your hips should be slightly higher or equal to your knee joint (90 degrees bend).

- If sat at a table or desk using a computer, the middle row of the keyboard should be level with your elbow and the top of the screen (not the screen casing!) level with eye height.

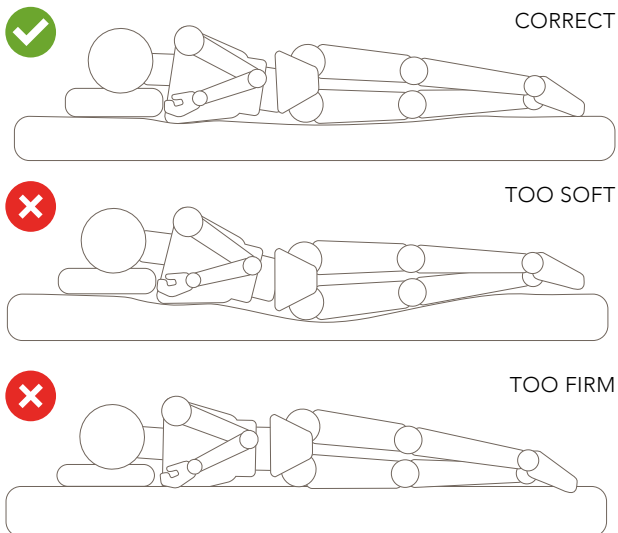


- If sat at a table or desk writing, the elbow should be just below the table top. A writing slope (or tilted surface) helps stop the body from needing to lean forwards, thus maintaining good posture.
- Office chairs can be easily altered to fit the individual, however home furniture is not so easy. To check if your sofa / armchair is right for you, you should be able to sit down into the correct position (back supported and feet on the floor) in one motion holding a cup of tea. Also you should be able to stand up again from that position in one motion still holding and not spilling the tea, without putting your hands down.

**If your home furniture is:**

- Too deep – pack the back with firm cushions
- Too soft – wrap a wooden board in foam and put it under the seat cushions
- Too low – raise it up using wooden blocks under the feet
- No back support – use a rolled up towel

- **The Sleeping Posture** - 40% of our lives are spent in bed, therefore both the bed and sleeping position are important to prevent back problems developing or re-occurring.
- Make an assessment of your bed – lay on your back, slide your hand (palm down) between your lower back curve (small of your back) and the mattress...



- Slide hand through fairly easily with no gap? Sounds OK!
- There is a gap? Probably too hard - lay a spare duvet down under your bottom sheet to soften
- Struggle to push hand in? Probably too soft – if the mattress is not sagging try putting a board under it to add stability. You may need to replace the mattress / bed if it is sagging

Make sure you have enough space, consider the height (getting on/off and making/changing it), the width and the length. A cramped night's sleep will not help reduce or prevent pain.

**Sleeping positions and actions that can help:**

- Side lying with pillow between knees
- Put a pillow under the knees when laying on your back
- Put a sleep roll (or rolled up towel) round your waist (especially if side lying)
- 'log roll' to turn over in bed (keep body in a straight line, cross ankles and bring arm across body to roll)
- Fidget when awake, don't try to lay still
- Do not 'heave' sit-up style into sitting from lying on your back. Instead, roll over onto your side, move your feet over the edge of the bed and use your arm to push you upwards (while your feet move down to the floor as a counter weight)

**Lifting and Carrying**

This is the most common cause of back problems that are not postural.

Most back problems we treat come from poor lifting or carrying at home!

**Tips for lifting and carrying**

- Avoid the activity in the first place. If that is not possible, reduce the load / task
- Get help
- Use equipment to help e.g. hoist or trolley
- Breakdown the load or distance to be carried

**Assess and clear the route that the load will travel**

- Ensure all doors are open and big enough
- Ensure there are no trip / slip hazards
- Ensure the new location is clear, large enough and at a safe height

**Ensure that you are appropriately clothed**

- Clothes should allow a full range of movement
- Shoes should be suitable for the task

**Use a safe lifting technique:**

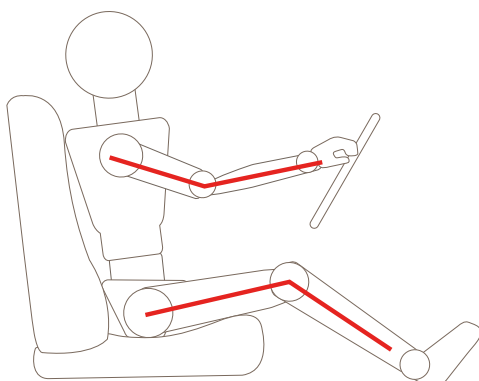
- Picture removed
- Assess the load – can you lift it safely? If not, ASK FOR HELP
- Get your feet around the load if possible - if not, place them at the 'ten to two' position
- Get as close to the load as possible - never lift at arm's length
- Get a good solid grip
- Bend from your knees (not your back)
- Keep your back straight
- Chin up and look where you are lifting to
- Keep the load as close as possible - hold it close to your pelvis
- DO NOT TWIST OR TURN



**Driving**

**People who spend a large amount of their time driving are more likely to get back problems.**

- Proper adjustment - Starting with the seat in an incorrect position makes it easier to get the correct position, so push the seat all the way back, place it as low to the floor as possible and recline the seat 40 - 45 degrees.



- Bring the seat height up until you can comfortably see the road and instruments and your hips are as high as your knees. If you are still too low, try adding a small cushion or folded towel under your tailbone
- Move the seat forward so you can reach and fully depress all the foot pedals with a comfortably bent knee.
- Bring the back forwards until you are reclined at a 100-110 degree angle (check the previous sitting posture information for more detail)
- Adjust your headrest so it rests in the middle of your head – it should not push your head forwards!
- Adjust the lumbar support so that you have even back support and can feel it supporting your lower back comfortably. Use a rolled up towel if your seat lacks sufficient support
- Bring the steering wheel down and towards you to minimize reach. You should be able to reach it with a slightly bent elbow and your back resting on the seat-back
- Now adjust the mirrors. If you start to slouch down or get into a bad position, the mirrors will feel like they need to be adjusted – this is your cue to correct your posture!

**Holding the steering wheel**

- Lower your hands from the 'ten to two' position to the 'quarter to three' position and feel your shoulder and neck muscles relax

**Getting in and out**

- Always remove your wallet from your back pocket before sitting (it causes the pelvis to twist which stresses the back)
- When getting in, sit first and then swing your legs into the car
- To get out, slide the legs out first and then stand up to decrease low back strain
- Give your body a few minutes out of the car before lifting things out of the boot - do a few back straightening movements first
- Take frequent breaks to get out and stretch - at least every two hours

**Exercise in traffic jams**

- Shrug shoulders, hold for five seconds, relax & repeat x five
- Pull shoulder blades back, hold for five seconds relax and repeat x five
- Tuck chin in, hold for five seconds, relax and repeat x five



## Aiding Recovery with a Home Exercise Programme

DO NOT rest in bed until the pain resolves. This often makes the pain and/or problem worse.

Where possible, the best advice is to stay active and continue your daily activities as normal.

- Obviously if these activities are adding to the pain then do not continue them, but getting back to work and keeping the area moving is most often the best way to minimise the pain.
- Do regular gentle mobilising exercises. Examples are shown below. REMEMBER most people find one or two exercises they just cannot get along with! If you find that an exercise is making you worse, STOP! You most likely need assessment to get the best exercises for you!

Exercises come in different levels (often called 'intensities'). Generally, the harder the exercise is, the more intense it is said to be. Below, the exercises are separated into 'less difficult', or 'lower intensity', at the top and 'more difficult', or 'higher intensity', at the bottom.

- Start at the top and see which ones you can do.
- Stop if an exercise increases your pain.
- Do not do exercises that make you feel worse.
- Only work your way down the list as you feel you can. Remember, at some point the exercises will be too hard for you. Don't do the ones that are too hard.
- If you can't do any of the exercises, contact us for further guidance.

### Early Exercises:

When you first get a back problem, or when that problem is particularly bad, exercises can help. However, getting on and off a bed - or worse still, the floor - can do more harm to your back symptoms than good! So it is always advisable to start with exercises in standing not lying. Obviously doing them this way limits your options (there are literally hundreds of floor exercises for the back), so these exercises are often done frequently to make up for the fact that they are not that hard.

### Doorway exercises:

Extension - this is a variation of a floor exercise but done standing. Using a door frame, stabilise your shoulders by holding the door frame (you can have your arms lower if you can't get them as high as the picture) - this makes the exercise a pure back exercise, not a whole body one. Stand with feet hip width apart. Now GENTLY move your hips forwards to arch/extend your back. STOP just before any pain. This movement may be very small at first and you may not even be able to stand straight. Never mind - move your hips through the door frame. Some people find just trying to stand straight hard enough. Just do what you can! This exercise should be gentle and should NOT increase your symptoms. This exercise is NOT 'no pain no gain'.



Repeat ten times.

Do once each waking hour (do your best).

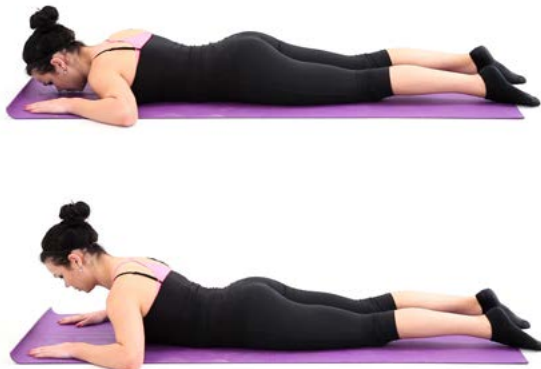
Side to side – again, a variation of a floor exercise. In a door frame, stabilise your shoulders (you can have your arms at any height). Feet hip width apart. GENTLY move your hips to one side and then the other. Be careful not to lean with your shoulders as you do this. STOP just before any pain. This movement will be better on one side than the other. Sometimes it is tempting to only go to the worse side - don't! You will make that your better side and limit the other side. Go to the edge of pain and come back to the middle. Do the exercise reciprocally (left then right and repeat). This exercise should be gentle and should NOT increase your symptoms. This exercise is NOT 'no pain no gain'.



Repeat ten times to each side every waking hour (or as you can).

**Floor exercises (early level)**

**Extension** - Lie on your stomach on the floor or a bed. Use your arms (not your back muscles) to raise your shoulders up, arching/extending your back. Be gentle here, you may only be able to move your shoulders slightly at first. That's OK. Don't push into pain, stop at the edge of it. Relax back down and repeat.



Repeat ten times

Do up to once an hour (be sensible - if increased frequency increases your pain, do less)

**Knee rolling** - Lie on your back and bend your knees (to gauge how far, bend one knee until your heel is opposite the other knee then bring the flat leg up to match). Place your feet and knees together. Now, under control, roll the knees to one side as far as you can without pain. Now return to the middle and repeat on the other side. One side will be easier than the other. Don't force the stiffer side - let it even out over time.



Repeat ten times to each side (do one side to the other)

Perform up to every hour (be guided by symptoms - more symptoms = too much)

**Kneeling flexion/extension (cat/camel stretch)**

- Kneel on all fours. Keep your hands under your shoulders and your knees and feet hip width apart. Make sure your hips are at a right angle (not forward or back from your hips). Now arch your back as far as you can comfortably. Do not force the movement. Now go the opposite way and round your back. Again, don't force the movement. Relax to the middle point and repeat.



Repeat ten times (up and down)

Perform up to five times per day (best done as you wake and just before going to bed)

**Back bracing (pelvic tilt)** - The starting position is key in this exercise, as you are teaching your muscles to start working in the correct pattern again. Lay flat on your back on a solid surface. Bend your knees so your feet are now where your knees were (this is easiest to do by bending one leg so the heel of your foot is at knee level, then bring the other knee up to match it). Your hips, knees and feet need to be aligned with each other (known as 'making train tracks' with your legs). To do this, place your feet together then turn your toes outwards as far as you can whilst keeping your heels together. Now bring your heels to match your toes, which puts your feet hip width apart. Now line up your knees with your toes so your knees are now hip width apart. Now brace your back into the floor and hold (you can put a hand under the arch of your back to feel the contraction). Many people find activating their pelvic floor helps with the bracing (tighten your muscles as if you were stopping mid flow when using the toilet), although this isn't compulsory.





Hold for five-20 seconds (longer is harder. Remember to breathe naturally throughout)

Repeat up to 20 times (more repetitions is harder)

Repeat up to hourly (more times a day is harder)

### Advanced exercises:

**Bridging** - Lay flat on your back (start on a solid surface but doing these on the bed can increase the difficulty). Bend your knees so your feet are now where your knees were (this is easiest to do by bending one leg so the heel of your foot is at knee level, then bring the other knee up to match it). Keep your feet hip width apart (to get this width, place your feet together then turn out your toes as far as you can whilst keeping your heels together. Now bring your heels to match your toes). Now line up your knees with your toes (often referred to as 'making train tracks' with your hips, knees and feet) so your knees are now hip width apart.



From this position, brace your back into the floor. Now lift your hips (keeping your legs in that straight line). Hold this position (the longer you hold, the harder the exercise). Hold for at least a second up to 20 seconds and remember to breathe naturally throughout. Now relax and repeat at least five times (more repetitions is harder). Be careful to gauge your level. Use more time held or more reps to progress this in a controlled manner.

Perform one-three times per day

**Flexion** - Flexion is an excellent exercise of the spine but is an advanced exercise that many people simply don't like. If you try this exercise and find it aggravates your problem, stop immediately. There are many alternatives to this exercise - seek professional advice for these.

Start by laying on your back on a hard surface. Raise one leg up by bending your hip and knee (to make this exercises easier at first, try leaving your foot on the floor and drag the foot along the floor, this supports the weight of the leg). If you can - raise the knee up and clutch it to your chest with your hands. Note, many people have to start this exercise by just bending the hip and knee as far as they can without even lifting the foot off the floor. It can take many sessions before you can even reach your knee to grab it, never mind pull it towards you. If you can reach your knee, pull it gently towards you.



Hold the position for one to 30 seconds (longer is harder)

Repeat five times

Repeat up to five times per day (best done as you wake and just before going to bed)

**Flexion** - Double flexion is a very advanced exercise and is a progression of the one below. Once you can hold each knee towards your chest for 30 seconds, you can progress to doing this exercise with both knees.



Be very gentle when pulling here

Hold for five-30 seconds

Repeat five times

Repeat up to five times per day (best done as you wake and just before going to bed)

**Table top** - this is an advanced version of back bracing (as seen above) and is an exercise with three levels.

Level one: Lay flat on your back on a solid surface. Bend both knees so your feet are now where your knees were (try bending one leg first so your heel matches the opposite knee, then bring the other leg up to match).

Now brace your back into the floor and hold (you can put a hand under the arch of your back to feel the contraction). Many people find activating their pelvic floor helps with the bracing (tighten your muscles as if you were stopping mid flow when using the toilet), although this isn't compulsory.

Once braced, raise the knee up until you have made a right angle with the hip and the knee (as seen below).



Hold for five-20 seconds (longer is harder and remember to breathe naturally throughout)

Repeat up to 20 times (more repetitions is harder)

Repeat one-three times per day (more times a day is harder)

**Level two** - This is a much more advanced version of this exercise and involves lifting both legs at the same time (keep your legs together). This can be far too much for the back in the early stages and should be used much later in your program. Lift both legs to the table top position and hold.



**Level three** - (pilates 100's) in level three of the exercise, the position above is held and the arms are held straight by your sides. Keeping the back braced, move the arms off the floor in a one-five inches (or three to 15cms) oscillating motion. This exercise is known as 'hundreds', as you are aiming for 100 oscillations. Start low - try 10-20 and work up! Lifting the head at the same time is an advancement of the exercise as it further tightens the back. Start with the head resting on the floor (do not lift the head if you have had any neck problems). Try to breathe normally throughout if possible (many people hold their breath to stabilise their back at first, breathing in for five and out for five, as is often advised, makes many people light headed).



Repeat one-three times per day

**Swimming or Superman exercise** - this exercise can be done laying on your stomach but can be progressed to four point kneeling.

**Lying on stomach** - lie on your stomach with your hands up above your head (you will need a large space to do this). Lift one arm and the opposite leg off the floor (just one-two inches or three-six cm is good at first). Don't lift too high at first or you will make it painful! Hold for five - 30 seconds (longer is harder). The higher you lift, the harder the exercise.



Repeat five -20 times (more is harder - remember to breathe naturally throughout)

Do one-three times per day (more is harder)

**Kneeling (very advanced)** - start by kneeling on all fours. Keep your hands under your shoulders and your knees and feet hip width apart. Make sure your hips are at a right angle (not forward or back from your hips). If you're not in a stable position you may fall over doing this exercise! Now lift one arm and the opposite leg off the floor. Straighten the arm and leg and lift them above body height if possible (this may be too hard in early attempts). Hold for five-20 seconds (longer is harder especially for balance) and remember to breathe naturally throughout.



Repeat five-20 times

Do one-three times per day

**Plank** - a popular stability exercise best done once you feel better to stabilise your back (or core as it is referred to). To do the plank, lie on your stomach and bring your arms under your shoulders. Push up onto your forearms so your elbows take the weight of your upper body (try to keep your arms straight down from your shoulders). Tighten your back muscles and raise your hips so your body makes a straight line (a plank). Try to breathe normally if possible.



Hold for five seconds upwards (some very strong people can hold this position for many minutes)

Repeat one-five times (dependent on hold time - longer hold = less repetitions)

Repeat up to once per day (normal is one-three times per week)

### General advice:

- Generally keep changing your position every 20 minutes
- Try to walk short distances at least twice a day
- Take your pain medication
- Make sure work surfaces are at a comfortable height so you don't have to bend your back
- Replace a sagging mattress
- When performing tasks around the home, keep your back in mind and try to minimise straining or stretching it and pace yourself. For example, squat or kneel when cleaning the bath or reaching for low shelves and use an upright vacuum cleaner, keeping it close to your body. Divide up your tasks by room or activities and into bite-sized pieces. Rest in between each task
- If you have young children, bend your knees and don't twist to pick them up. Adjust the height of the cot so you don't need to bend, and try to avoid picking toddlers and older children up at all

**You may need a consultation!**

Back pain can be very complex and it can take an experienced clinician to get to a correct diagnosis. What helps one person's back pain can make another person's worse, even if the cause is the same! Clinicians have been trying to resolve back problems for generations and although we are now better at it, individual symptoms and reactions to treatments often still confound us!

There is no one size fits all treatment method!!!

**When to seek immediate further advice:**

- If the pain has persisted for more than two weeks
- The pain goes down into the leg
- If you have symptoms in both legs
- If you have bowel or bladder symptoms

Remember, if you try any of the things above and you feel they make you worse, not better contact us for individual advice!





## CONTACT US

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