

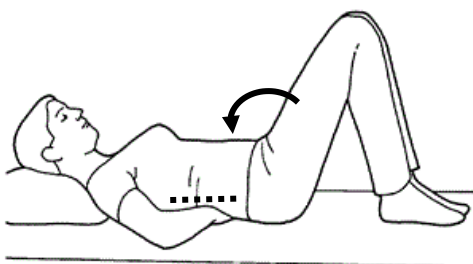
Low back pain is a common problem, affecting around one-third of the UK adult population each Year<sup>1</sup>. For some there is an obvious cause e.g. injury or trauma, for others this is not the case i.e. perhaps a result of their lifestyle and the postures they adopt day to day.

The lower back has a natural curve called a lordosis, this provides a shock absorbing benefit, like a spring effect, however for some this postural curve can become too pronounced, almost exaggerated. This hyper-lordosis in combination with lifestyle and postures can result in lower back stiffness, muscle tightness and core muscle deconditioning. In some cases the pain can be severe and travel down the nerves in your legs.

Your physiotherapist can help you to relieve these symptoms with the following exercises.

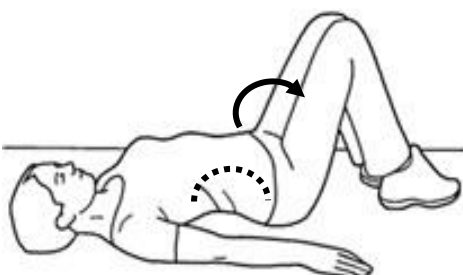
### 'The pelvic tilt' - control the lordosis<sup>2</sup>

Picture 1



Lying on your back with knees bent. Put your hands under the small of your back (picture 1). Tilt your pelvis backwards, pressing on your hands. Use your abdominal and core muscles to push further into your hands.

Hold for .....seconds.



Then relax your abdominal and core muscles, this will release the pressure on your hands.

Try using your lower back muscles to arch your back and tilt your pelvis forward (picture 2).

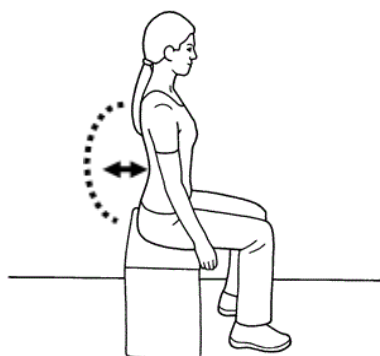
Hold for .....seconds.

Repeat .....times.

Picture 2

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Picture 3



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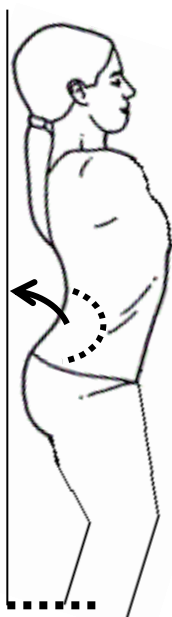
The pelvic tilt can be done is sitting (picture 3). First sit upright, try using your lower back muscles to arch your back and tilt your pelvis forward. Hold for .....seconds.

Then relax your back muscles, but this time use your abdominal and core muscles to tilt your pelvis backwards to curve your back. Hold for .....seconds.

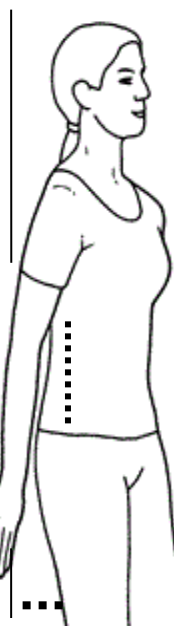
Repeat .....times.

### 'The pelvic tilt' in standing

Picture 4



Picture 5



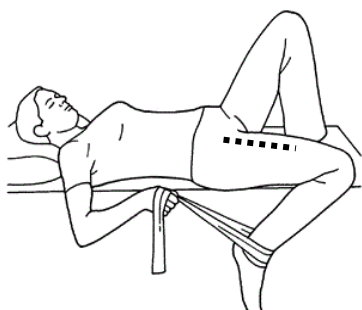
When you stand with your shoulders, bottom and heels against the wall, you will note the arch in the small of your back stands proud of wall (picture 4). The aim of the exercise is to tilt your pelvis backwards to strengthen core muscles to modify your standing posture.

This can be achieved in three easy steps.

1. Stand with your feet approx. ....inches away from the wall. Bend your knees slightly. Now try to tilt your pelvis back. Hold .....seconds, repeat ..... times.
2. Now try the same pelvic tilt with your knees straight. Hold .....seconds, repeat ..... times.
3. Gradually reduce the distance your feet are from the wall and practice the pelvic tilts (Picture 5). Hold .....seconds, repeat ..... times.

The hip flexor and quads stretches - 'towel stretch'

Picture 6



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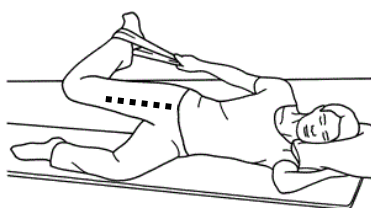
Lay on your back (picture 6), keeping your pelvis tilted backwards and your lower back flat against the bed.

Hold onto your ankle with a towel. Gently draw your foot towards your buttock.

Hold for .....seconds.

Repeat .....times.

Picture 7



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Picture 7 shows the same exercise laying on your side, remember to try and keep your back flat.

Hold for .....seconds.

Repeat .....times.

'lunge stretch'

Stand straight with hands on hips, one knee bent in front, and the leg to be stretched, is supported on a stool or chair by its shin and foot as shown. Avoid putting weight through the knee.



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Bend your front leg, lunging forward from the waist, keep your back upright. Feel the stretch in the front of the thigh on the supported leg.

Hold for .....seconds

Repeat .....times.

Picture 8



## The Pilates Rest Position

In the rest position your muscles are relaxed and your joints are in neutral alignment. You should try to incorporate the key points of the rest position into all postures throughout your day.

- Lie on your back with your knees bent up and your head supported on a small cushion or folded towel
- Relax the weight of your head into the support
- Lengthen the back of the neck by reaching the crown of the head towards the wall behind you
- Gently draw your shoulder blades down towards your waist to relax the neck and shoulders
- Soften the ribcage into the mat to connect the back of the ribcage on the mat
- Place your feet and knees hip distance apart
- Make sure that your weight rests on the six key points of the feet: the base of each big toes, each little toe and the centre of the heel on each foot
- Imagine your pelvis is a bucket of water. Tip it backwards to spill some water out the back of the bucket and you will feel your back gently flatten onto the mat. Now tip it forwards to spill some water out of the front of the bucket and you will feel your lower back arch slightly. Find your 'neutral spine' position by resting the bucket halfway between these two movements. There should be a small space between your back and the mat, and your pubic and hip bones should form a small flat triangle
- Maintaining the neutral spine position, INHALE wide into the sides and back of the ribcage and then EXHALE. At the end of your exhale, slowly draw up through the pelvic floor muscles to engage these and your deep abdominal muscles. Hold this gentle contraction and keep breathing for up to ten breaths. This is called engaging your centre.



## One leg Stretch

Starting position: Rest position. Centre engaged.

### Level 1

- INHALE to prepare
  - EXHALE, slide your left heel forwards along the floor
  - INHALE, slide your left heel back along the floor
  - Repeat alternating legs
- Reps: 10



## References

1. Low back pain; Early management of persistent non-specific low back pain. NICE clinical guideline 88 May 2009 updated 2014  
[online <http://www.nice.org.uk/guidance/cg88/resources/guidance-low-back-pain-pdf> 28/9/15]
2. O'Sullivan P, Diagnoses and classification of chronic low back pain; maladaptive movement and motor control impairments as underlying mechanism. Manual therapy (2005) 10:242-255.
3. <http://farbeyondstrength.com/2015/02/05/the-dangers-of-imbalance/>  
[images online 14/7/15]

## Contact details

Poole Hospital NHS Foundation Trust Longfleet Road, Poole Dorset BH15 2JB  
Telephone: 01202 442121

[www.poole.nhs.uk](http://www.poole.nhs.uk)

Author: Jackie Kidd, Andy Hayward, Ian Kennedy, Lucy Purrier