

Management Strategies for Back Pain



Northern Health
and Social Care Trust

Physiotherapy Service

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Northern Health & Social Care Trust Physiotherapy attendance policy.

- If you do not attend your appointment you will be discharged
- If you are unable to attend 2 appointments without at least 24hours notice you will be discharged
- If you are unable to attend please contact the central booking office on **(028) 27660328.**

Top tips for managing Low Back Pain

There is an 80-90% incidence of having LBP at some stage in your life. Approximately £1.6billion is spent on treatment in UK each year and £5billion lost through 11million sick days.

The good news is that most back pain is **NOT** serious or permanent.

If LBP is not managed correctly from the outset this can then develop into a chronic pain cycle, particularly if you continue to avoid movement and exercise.

LBP when present often leads to altered movement patterns which can cause:

1. Reduced flexibility and stiffness due to guarding
2. Muscle spasm and tension
3. Reduced strength and endurance in our stabilising postural muscles

Current evidence would suggest that LBP is best managed with:

1. Appropriate pain relief
2. Education
3. Exercise (particularly group based classes)

Strategies for managing LBP

The Chartered Society of Physiotherapy recommends:

- Exercise and activity are the most important ways of helping yourself if you have LBP
- Keep moving and continue activities such as walking or swimming
- Paracetamol or similar pain-killers, taken as advised by your GP, can help keep you moving comfortably
- Avoid prolonged sitting when driving or at work
- Gently stretch to prevent stiffness
- Take care when lifting – bend your hips and knees to use the power in your legs
- Check your posture when driving, watching TV etc.
- Ensure your mattress supports you properly
- Don't smoke – it impairs circulation therefore delays recovery
- Strengthening your trunk muscles, with Pilate's based exercises may help to protect your back
- Make sure your car seat/office chair is adjusted correctly to support your back
- Eat a healthy diet and exercise, as being overweight can be a cause of back pain

Benefit of diagnostic imaging?

Both healthcare professionals and members of the public often consider getting a scan “just in case” there is something serious involved in their LBP.

However, evidence now suggests that scans only show something truly important in a small minority of people with back pain (5%).

A brief consultation with a healthcare professional, where they would assess for any potential red flags should be enough to decide if a scan is required based on the individuals symptoms and medical history.

AN MRI CAN BE OFTEN BE MISLEADING

Research carried out recently has shown that if you take an MRI scan of individuals **WITHOUT** back pain they often show up various degenerative conditions.



These changes are a natural part of the ageing process and not all individuals will have symptoms of LBP.

Given this evidence we now realise that scans are often misleading and show normal degenerative changes that are **poorly** linked with pain.

Unfortunately people with back pain are often told that these normal-age related changes are the cause of their pain and they then believe that their back is “damaged”!

This then leads to fear avoidance management strategies, distress and anxiety. The individual often reduces their activity levels, which only causes further stiffness, muscle spasm and reduced strength/endurance, developing into a chronic pain cycle.

As pain becomes more chronic our nervous system becomes hypersensitive due to the release of stress related hormones and chemicals such as cortisol and cholecystokinin. Activities that would previously not have caused us much pain start to become much more painful as the brain incorrectly interprets and regulates the messages from your nervous system.

The good news is that exercise causes the release of “feel good” chemicals and hormones in your body which helps to reverse the nerve hypersensitivity and reduce pain levels

Start Active, Stay Active: The Benefits of Exercise

Benefits your health **Improves sleep**
Manages stress

Maintains healthy weight
Improves quality of life

Reference: UK Chief medical Officers' Guidelines 2011 [http:bit.ly/startactive](http://bit.ly/startactive)

What type of exercise?

All types of exercise are good - pick one that you enjoy, can afford and that is convenient. Walking, swimming, cycling, jogging, running and stretching are all good.

Comparative trials of different types of exercise rarely demonstrate a difference and research reviews have not clearly demonstrated a type of exercise that is superior.

When you are in pain, starting exercise can be very hard. Under-used muscles feel more pain than healthy muscles. Therefore, if you feel sore after exercise, this does not indicate harm or damage to the body, it is simply your muscles starting to adapt to the increased activity levels, and this will settle with time.

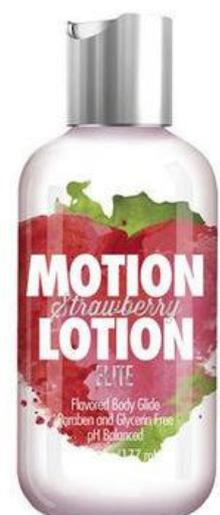
A few difficult questions!

- 1. What prevents you from exercising?**
- 2. Are you prepared to engage with exercise as a method of self-care?**

Many people are afraid of exercise and avoid it as they think it may cause them more problems. However we know this is not true

When you have LBP exercise helps to:

- Reduce muscle tension and spasm
- Improve flexibility
- Improve muscle strength and endurance
- Improve cardiovascular fitness
- Provide pain relief through the release of pain reducing chemicals and hormones such as serotonin and endorphins
- Stimulates the production of Lubricin – a substance produced within the joints during physical activity that helps to lubricate the joints allowing tendons to glide and joints to slide more efficiently with less pain
- Improves your mood and reduces stress



Improving the quality of sleep

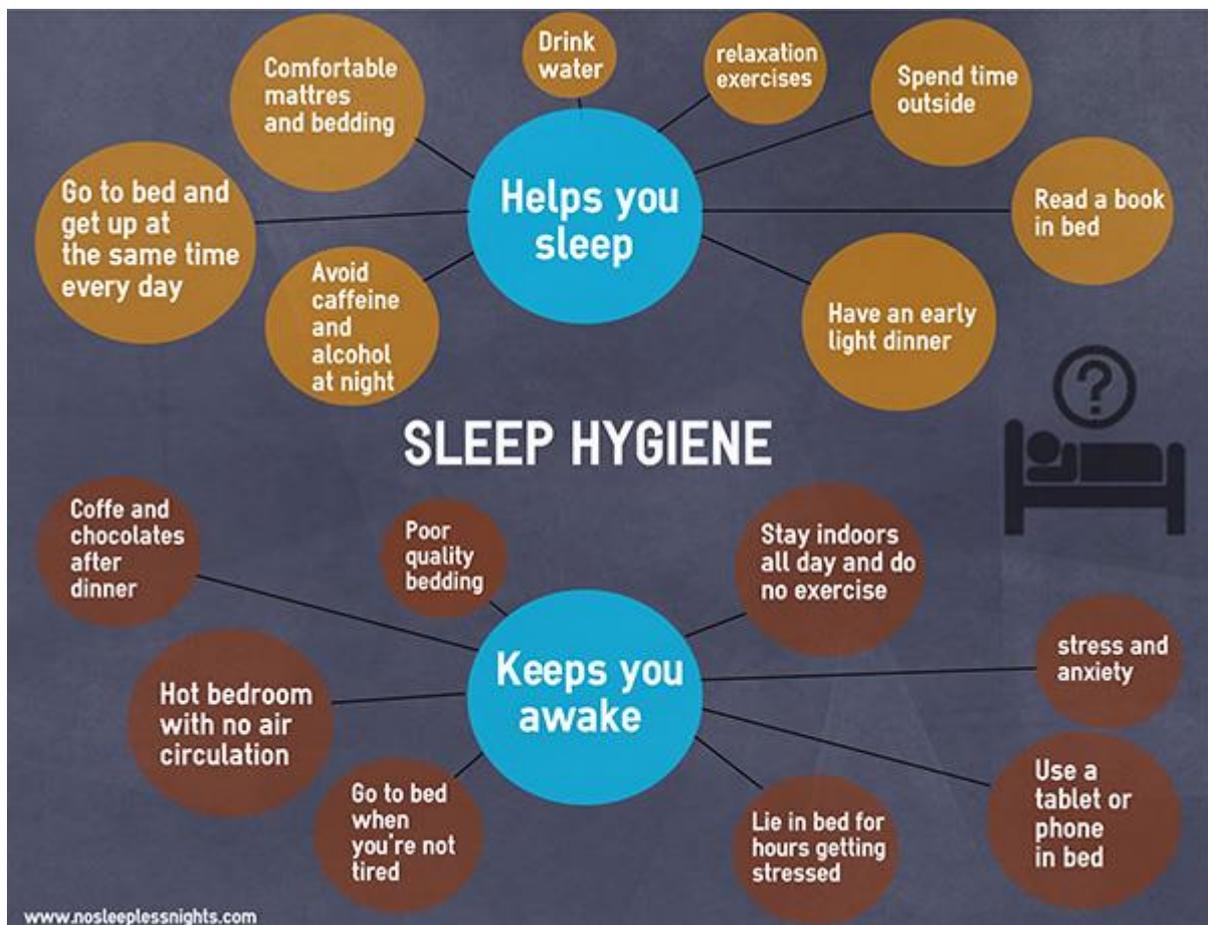
Sleep is an essential biological phenomenon. Changes in sleep pattern, such as poor quality sleep can be associated with the development of painful conditions.

In the same way that poor sleep can make us more stressed, give us a headache, make us tired or feel down, it can also cause or prolong back pain.

It is argued that prioritizing sleep and better sleeping habits are necessary for a better health quality.

There is evidence to suggest that physical exercise is able to improve sleep patterns in healthy individuals (Keedlow et al., 2015).

The diagram below provides some useful hints and tips that may help to improve the quality of your sleep



Boom & Bust Activity/Pacing/Goal Setting

People with persistent pain symptoms often have difficulty **balancing activity and rest**.

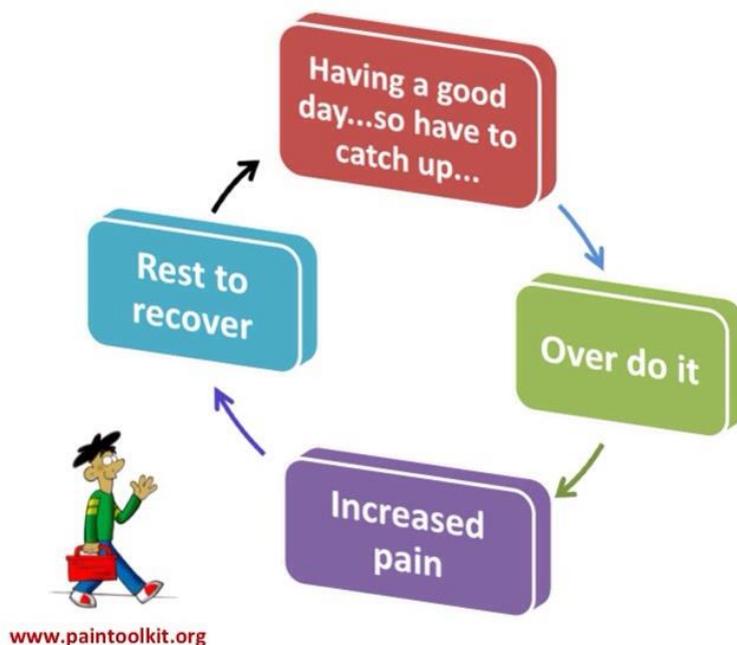
Some people in the early stages of symptoms rest almost all of the time thinking it would help. We now know that this leads to general deconditioning, weakness and stiffness which only makes pain worse.

However, there are also those individuals who push on regardless until pain tells them to stop:

*“Work has to be done”
“Feels better to finish the job”
“I feel guilty burdening others”
“Don’t want to give in to the pain...I’m not letting it beat me”*

This is NOT pain management...This is PAIN managing YOU!

Boom & Bust Cycle

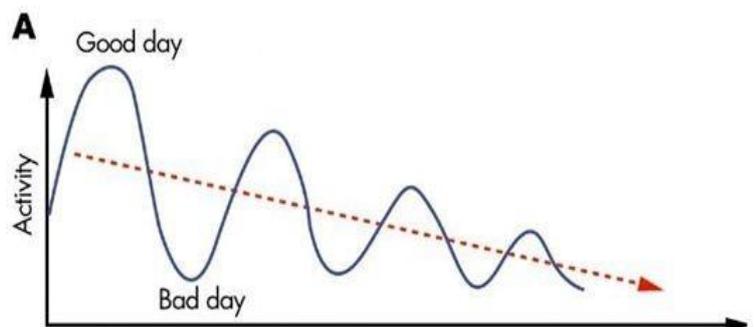


This then leads to a “**Boom & Bust Cycle**” as shown in the diagram.

The negatives to this are:-

1. Increased pain as you keep overdoing it
2. Increased rest periods to allow pain to settle

This then leads to further deconditioning and reduced activity levels as shown in the chart below



PACING helps you to regain control and break the Boom & Bust cycle. It is the key tool to **self-management** and helping you progressively return to enjoyable activity.

How do we pace our activity?

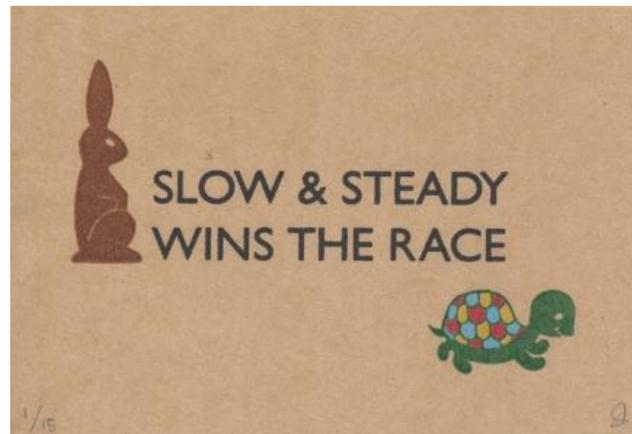
Attempt to establish your baseline – you need to recognise the warning signs that you are doing too much and are at risk of flaring up.

The key to pacing is to ensure you take a break before you need one!!

Avoid tackling all your tasks at once and learn to prioritise which tasks are essential

By avoiding the Boom & Bust activity trap you will have less periods of pain and inactivity.

Your body will become stronger having not had any prolonged periods of pain and inactivity, and over time you will be able to do more and set your baseline higher.



Goal setting

Setting goals is a bit like pacing and helps you gradually build up activities.

Solutions to help regain control

- Decide on your daily goal – Include something fun/pleasurable to help fill time and absorb your attention, an activity, such as walking/exercise and some relaxation time
- Think about all the things you need to do to achieve that goal
- Look at each thing in turn – what do you have problems with?
- Use your pacing strategies to achieve this
- If not achieving review your methods.
- Track your progress with the use of a diary. This will help you build on success or learn from what didn't work.
- Have a set-back plan – it's not realistic to think you will never have a set-back especially if you forget to pace yourself
- Stress busters – attempt to reduce stress where possible in your life (relaxation techniques/breathing exercises/sleep quality)

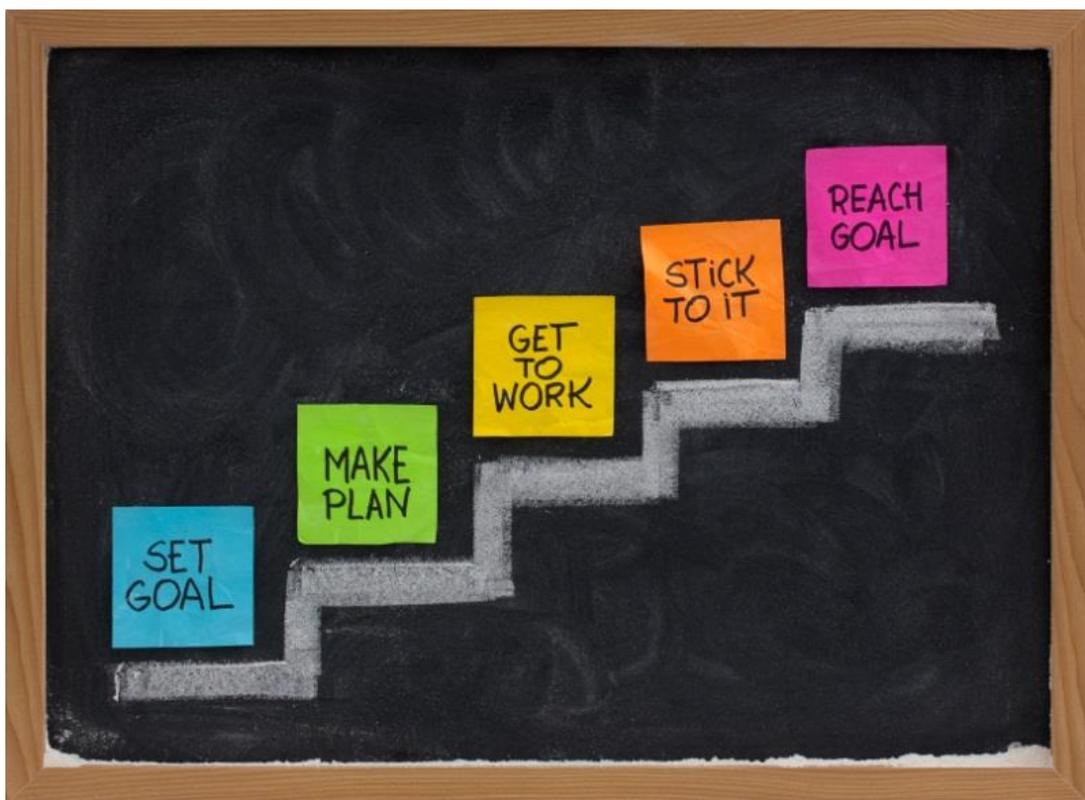
- Learn to be patient with yourself. It may take several weeks or months to see changes or improvements.

Reward yourself when you achieve a goal...even the smallest of steps is an achievement!

Set up a daily plan.

Make sure that your goals are realistic, enjoyable, specific and time set for example:

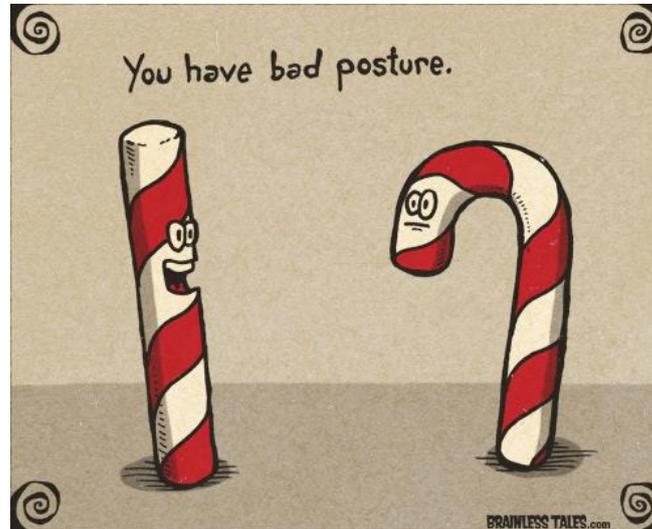
Monday		
Goal	Aim/Target	Time of day
ACTIVITY	Walk x 20 mins or stretch x 15 mins	4pm
RELAXATION	Lie on top of bed x 20 mins listening to music and do breathing exercises	9pm
FUN	Play a game with kids	7pm



Posture & Ergonomics

Posture

There is no such thing as “bad posture” just how long you stay in one position for that is “bad”



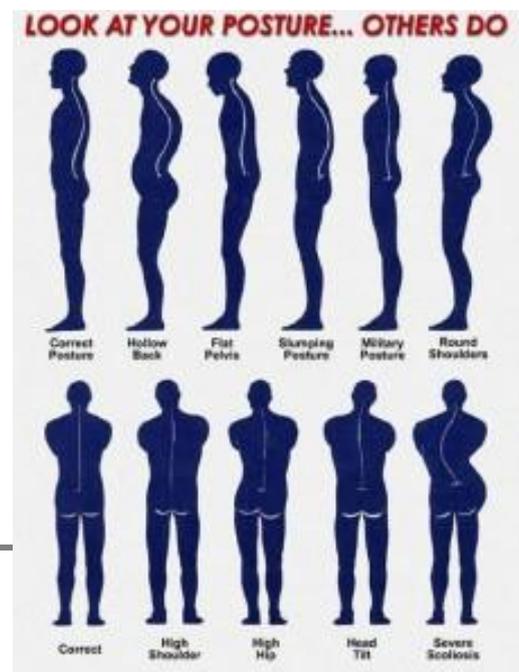
Many people find that their pain flares up when they adopt certain postures for long periods of time e.g. hunching over a desk or driving long distances.

Improving your posture is unlikely to address the root cause of your pain but it may help alleviate muscle tension.

Correcting your posture may feel awkward at first because your body has become so used to sitting & standing in a particular way. Initially it may require a conscious effort, along with some strength/flexibility exercises to correct your posture, but with a bit of practice it will become second nature and hopefully provide long term benefit.

“Good” Standing Posture

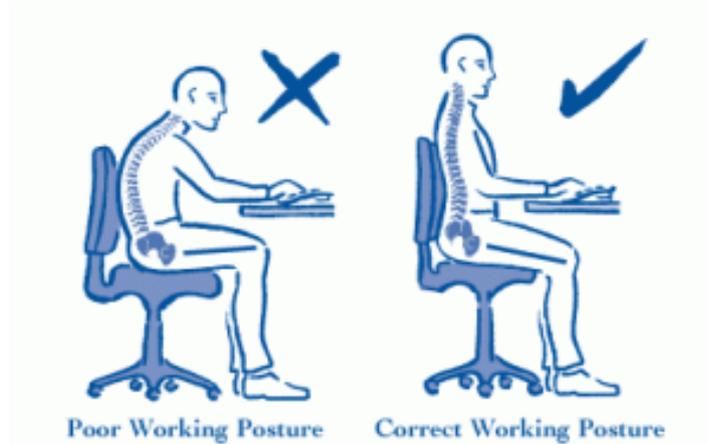
- Feet hip distance apart and weight evenly spread
- Soft knees (not locked back).
- Gently tuck your tailbone in.
- Gently lift your chest and draw your shoulder blades back and down
- Neck long with a gentle chin retraction



Work Postures

Setting up your desk/work station

- Arms relaxed by your side – relaxed shoulders
- Forearms parallel to desk with elbows at 90°
- Bottom right at the back of your chair for support
- Both feet flat on the floor and your knees level with your hips.
- Adjust chair and use foot stool if needed – open back angle and use tilt/height adjustments if present.



Driving Posture

- Raise the seat height.
- Move the seat forwards until you can fully depress the clutch and accelerator pedals.
- Adjust the angle of the seat back – ensure continuous support along the length of the back to shoulder height (100°)
Avoid reclining too much as this can lead to excessive forward bending of the head.
- Adjust the steering wheel height
- Adjust lumbar support so it fits snugly in your lower back.



Pilates 5 Key Points

1. Lateral breathing

Place your hands across the lower half of your rib cage with the tips of your fingers interlaced. Breathe in and let your ribs expand width ways, allowing your fingertips to draw apart. Do not lift your breastbone or elevate your shoulders.

2. Centering and muscle activation

- *Finding your neutral spine*

While lying on your back place your thumbs on your belly button, your fingertips on the pubic bones and place the heels of your hands onto the pelvic bones to form a diamond shape. Anteriorly tilt the diamond away from you (towards 6 o'clock) to exaggerate the arch in your lower back, then posteriorly tilt the diamond towards you (12 o'clock) to flatten your back. Then try to position the pelvic diamond in the middle of these two positions – this is called your neutral spine.

- *Setting your centre/neutral spine*

Feel your deep abdominal muscles by placing your fingertips on your pelvic bones and then slide your fingertips in approx. 2cm and down 2 cm. Breathe in and as you breathe out gently draw in your pelvic floor muscles and lower abdominal muscles. You should feel a subtle tension drawing away from your fingertips. Maintain a gentle muscle contraction of approx. 30 % to help maintain neutral spine. There should be a small gap between your lower back and the floor, enough to have a small grape in this space.

3. Rib cage placement

Attempt to maintain a connection between your rib cage and your pelvis by gently drawing your rib cage down towards your pelvis as you breathe out and avoid rib cage flaring when you breathe in or elevate your arms above your head.

4. Shoulder blade placement

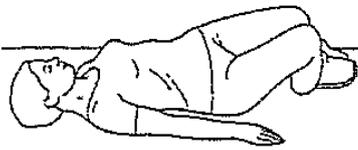
To find neutral shoulder blade position you should gently glide your shoulder blades back and down – do not squeeze your shoulder blades tight together – you should feel your collar bones widen across the front of your chest.

5. Head and neck placement

Lengthening the back of your neck helps to achieve correct alignment. The crown of your head should be as far apart from your tailbone as possible. Gently tuck your chin in, imagining you are holding a tennis ball under your chin.

Spinal Flexibility & Strengthening Exercises

Listed below is a selection of exercises that can be useful for improving spinal mobility and strength. If you are attending our “Active Bodies” exercise class some of these exercises maybe familiar to you. You can use this booklet as a resource for continuing your exercise program at home.

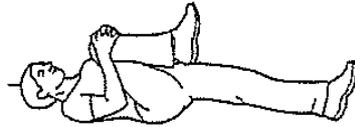


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Lying on your back with knees together and bent.

Slowly roll your knees from side to side keeping your upper trunk still.

2 minutes

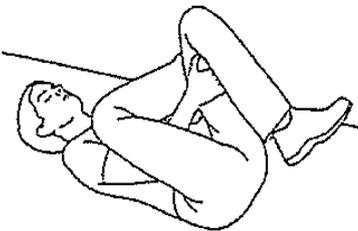


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Lying on your back.

Bend the leg to be stretched towards your chest and hold onto the knee with both arms. Pull your knee towards your chin keeping your head on the floor. You should feel the stretching on the back of your thighs and buttock. Hold approx. 20 sec. - relax.

Repeat 5 times each side.

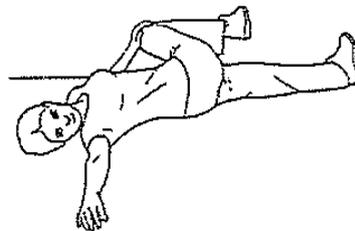


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Lying on your back with knees bent. Cross the ankle of the leg to be stretched over the other knee. Put your arms around the thigh as shown.

Bring your thigh towards your stomach. Feel the stretch in your buttock. Hold 10-15 seconds

Repeat 3-5 times x 2-3 times daily

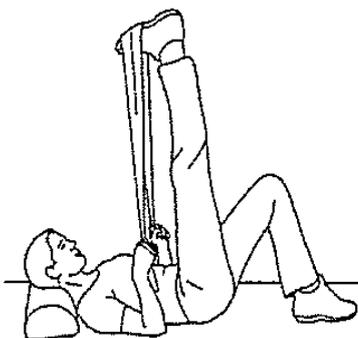


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Lying on your back with one leg bent.

Bring your bent knee over the other leg and push your knee against the floor with the opposite hand. Then reach with the other arm to the opposite side looking in the same direction. You will feel the stretching in your lower back and bottom. Hold approx. 20 secs.- relax.

Repeat 5 times.

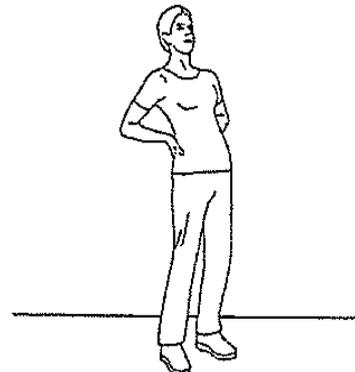


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Lying on your back with a cushion under your head. Put a band under the sole of your foot and hold onto the band with both hands.

Lift your leg straight up. Pull the band flexing the ankle and stretching the back of your thigh. Hold approx. 20 secs.- relax.

Repeat 4-5 times.

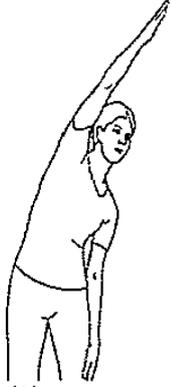


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Stand straight with feet apart.

Support your back with your hands while bending backwards - move your hands up your back with each rep. Keep your knees straight during the exercise.

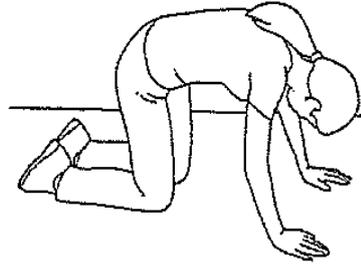
Repeat 10 times regularly.



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Stand straight with one hand on your hip and the other straight up.

Bend to the side with opposite arm reaching overhead. Keep your pelvis in mid-position. hold 5 secs
Repeat 4-5 times each side.

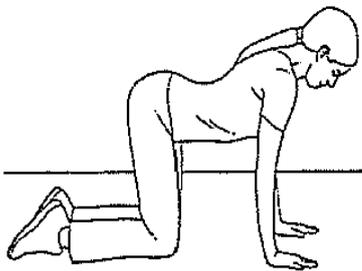


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Crawling position.

Arch your spine upwards while letting your head relax between your arms.

Repeat 10 times.



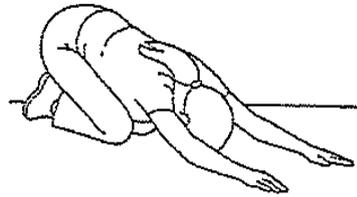
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Crawling position.

Hollow your back. Keep your neck long and elbows straight.

Repeat 10 times.

x 3 sets



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Crawling position.

Let your arms slide along the floor as far as possible. Push your bottom back and down and the chest towards the floor. Breathe out while doing the exercise.

hold 30 secs

You can increase the stretch to either side by lengthening one arm away further

Repeat 3-4 times.

Thread the needle



Arm openings



Bridging exercises



Crook lying exercise examples:

- Hundreds
- Heel taps
- Leg extensions
- Arm elevations
- Starfish



Side lying exercise examples:

- Clam
- Hip abduction
- Circles
- Side kicks





The Dart



Superman/Swimming variations



Squat with arm elevation



Spinal roll downs

The information and exercises in this leaflet are for guidance purposes only and is in no way intended to replace professional clinical advice by your Physiotherapist.