



ACTIVE

Back



Care

to tackle back pain

Introduction

Staying active is considered to be one of the best ways to stay fit and healthy. This, too, goes for preventing and managing chronic low back pain (LBP). Whether you have chronic LBP or not, Active Back Care will help you to stay mobile and retain or improve your health and well-being. Recognising the benefits of staying active is important for all of us.

Please note: this guide can only offer general advice, since it is not possible to recommend specific exercises for your pain without having seen you. You need to decide which activities are most appropriate for your needs. We recommend you check with your GP or physical therapist before trying any new activity.

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Contents

Understanding back pain	4
Physical activity, exercise and back pain	7
Exercising safely	10
Warning! High risk exercises	11
Choosing a good exercise class	12
Exercising - how much and what's best?	14
First aid exercises to help your back	18
Warming – up	21
Finding your balance	24
Strengthening and toning	26
Cooling down	29
Stretching	29
Everyday activities – how best to do them!	33
Relaxation	40
Mind over matter- the story of an active back carer	44

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Understanding back pain

In all countries – where surveys have been carried out – between six and eight out of every 10 adults will have significant back and/or neck pain at some time during their lives. Virtually everybody has back or neck ache from time to time. It is therefore the normal human state to have intermittent spinal symptoms.

This is not surprising as the vertebral column was originally evolved some 300 million years ago as the backbone of fish supported in water. We, as upright land animals, now live three times longer than our hominid ancestors of 2.5 million years ago, and place enormous and varied stresses on our amazing and complex spines over a lifetime.

Most of our spinal problems are therefore, primarily, related to our long lives and to a lesser extent to our sedentary lifestyles. Given this background, firstly, we need to understand what is going on in our backs generally and secondly, we have to manage the problem sensibly in order to minimise the impact of back pain on our lives, and on the lives of those around us.

When people have back pain they tend to stop moving and stop living. We, therefore, should aim to reduce this disability as far as is possible with intelligent self-management, sensible compromises, and appropriate help where necessary.

Some back facts

The Health Profile for England reports¹ use the Global Burden of Disease study to demonstrate that low back and neck pain remain the biggest cause of ill health overall, across all age groups (measured by Years Lived with Disability). There are over 9 million people living with long-term back pain in England alone.

In 2020, MSK problems were the second most common cause of sickness absence, which accounted for 20.8 million days lost in work (17.5% of total sickness absence), surpassed only by absence due to minor illness such as cough and colds.²

Affecting 619 million people globally in 2020, low back pain (LBP) describes pain between the lower edge of the ribs and the buttock. It can last for a short time (acute), a little longer (sub-acute) or a long time (chronic). It can affect anyone and is classified as specific or non-specific. Specific LBP is pain caused by a certain disease or structural problem in the spine, or when the pain radiates from another part of the body. Non-specific LBP is when it isn't possible to identify a specific disease or structural reason to explain the pain. LBP is non-specific in about 90% of cases.³

¹ <https://www.gov.uk/government/publications/health-profile-for-england-2019>

² Office for National Statistics, 2009 to 2019

³ World Health Organization

The nature of back pain

Back or neck pain are symptoms and not diseases, but will occasionally indicate some underlying serious condition. Much more commonly, it is an indicator of wear and tear or strain in the tissues of the spine or its adjacent muscles and ligaments – so called '**mechanical**' or '**simple**' or '**non-specific back or neck pain**' which accounts for around 85% of these problems.

Wear and tear or degenerative changes are very common in the spine and are sometimes evident even in young people. These changes are often completely symptom free and are a source of confusion on x-rays and scans, as they may also be associated with pain. One has to rely on clinical judgment in identifying sources of pain and it is often impossible to be sure of the precise origin. Therefore, x-rays and scans are often unhelpful in degenerative conditions.

In around **10%** of cases there is true **nerve compression** causing painful sciatica in the leg or brachialgia in the arm. These symptoms are often caused by disc protrusion or, in older patients, arthritic overgrowth obstructing the nerve channels. These changes are readily shown on scans.

The other **5%** is a miscellaneous group of **relatively rare conditions** including fractures, infections, tumours or congenital abnormalities.

Back pain is described as 'acute' if it is an isolated short-lived episode, but if the symptoms continue for more than three months then it is called 'chronic'. 'Acute-on-chronic' is a mixture of the two.

How to deal with back pain

Most people can manage their 'back attacks' themselves and experts now encourage people to resume physical activity sooner rather than later. Bed rest for more than a few days can be harmful causing weakening of the supporting muscles of the spine.

Remember, back pain is very rarely due to any serious disease. It is usually only necessary to see a doctor straight away if:

- you feel unwell eg if you are running a temperature as well as having severe pain;
- you become incontinent;
- you feel numb, or have pins and needles in both legs, around your back passage, genital area or inside the tops of your thigh;
- both legs feel weak;
- you feel unsteady on your feet;
- your back pain is getting worse.

Backache or dull back pain rarely indicates serious damage or progressive injury. It usually responds to stretching and strengthening exercises or physical therapy.

- Try simple painkillers like codeine or paracetamol. If that doesn't work within a few hours then try Ibuprofen but always read the leaflet in the box as any effective remedy sometimes has side effects in some people.
- Use something to control pain and reduce inflammation. Try alternating cold (packet of frozen peas) and heat (covered hot water bottle or hot bath or shower) alternating for one hour and two hours respectively.
- Keep moving about, avoiding lying down or sitting for too long or resume normal activity as early as possible.
- Stay at work or return to work as soon as possible modifying activities.
- Stay active gradually increasing your activity levels.

Choosing a treatment option

If your back pain is acute or prolonged enough to interfere significantly with your activities, then it is probably time to seek advice. Your first stop is normally your GP if this is a new situation. He or she will check that nothing serious is going on, which is rare, then you should receive advice on sensible management. You may wish to discuss parts of this book with your GP but remember they are busy people and it will help greatly if you have made a list of questions you want to ask beforehand. Your GP will advise you as to the best therapist for your condition who may be a physiotherapist, osteopath or chiropractor who has a good local reputation.

Physiotherapists tend to be more exercise orientated along with some soft tissue treatment.

Osteopaths treat back or neck pain by deep soft tissue work and manipulation which can also be effective.

Chiropractors are similar but have slightly different techniques and tend to specialise in the spine.

However, these are generalisations and there are wide individual variations. Reliable recommendations by GP or friends are helpful. If you are referred to the NHS, check the waiting time for an appointment and treatment. Long waits of more than a few weeks before treatment can be damaging and it may well be worth spending money on a private therapist to get back to work and to get your life back quickly.

Physical activity, exercise and back pain

Why physical activity and exercise are good for you

Back pain experts now agree that keeping active can be of great benefit for people with back pain and being sedentary can make back pain worse. Our bodies are designed to be active and our backs well suited to doing a whole range of activities and exercises.

Many people with back pain think that they should avoid exercise of any sort in case it makes them worse. This is unfortunate as regular exercise or generally staying active has been proven to be a great help in lifting the spirits, and improving fitness and well-being. Even relatively 'easy' exercises, such as walking and swimming, can help lessen your pain.

How physical activity and exercise helps your back

Your back is like a tent pole with guy ropes to hold it up which are the muscles and ligaments of the spine. Either can be a bit loose or 'shakey'. Exercise will improve muscle function and soft tissue tone and tighten the guy ropes to stabilise your spine. Sometimes the muscle attachments to bone, where the guy ropes go into the ground, are strained. Soft tissue treatment (heat, massage and gentle stretching) can be helpful.

Physically, activity and exercise may:

- strengthen muscles that support your spine;
- improve your balance and posture;
- help you become more flexible and supple;
- improve your circulation, fitness and stamina;
- improve your ability to do more day to day activity;
- help you to modify your activities;
- help keep your weight under control;
- improve your appetite;
- lessen the risk of certain diseases such as heart disease and osteoporosis.

Psychologically, activity and exercise may:

- counter the effects of depression (which are common with back pain);
- raise the endorphin levels (natural pain killers) in your body! This is why many people feel good after exercise – often experiencing a "high";
- help you sleep better and be more alert mentally;
- improve your self-efficacy – the belief that you can move without causing harm so enabling you to do what you thought was impossible!
- help reduce your fear of moving and of pain returning;
- increase your confidence and help allow you to do the things you enjoy;
- help you feel less pain;
- help you recover from pain episodes more quickly;
- help you think and act more positively;
- enable you to use less medication;
- keep you at work;
- help you find friends and support;
- be fun!

What will help you to stay active?

- After a bad episode of back pain, return to day-to-day activities as soon as possible; stay at work or return as soon as possible modifying activities.
- Try to think beyond the fear of doing the wrong thing for your back. You have to teach it who is boss, but like a good manager with a few sensible compromises.
- Remember what you have gained from exercise: your mobility may have improved; you may have experienced less pain; found a way to realistically manage your condition and you may have improved your quality of life.

- Remember when you felt good after exercise or after doing something that you thought you would never be able to do again and you did! (eg after going for a brisk walk, after carrying your grandchild, after doing a pilates class).
- Do activities that you enjoy, that give you a sense of well being and that are right for you.
- Remember how you change the way you do everyday activities to help your back.
- Your family and friends should understand that you are not 'ill' and that exercise is good for you.
- Initially, exercise with other back pain 'sufferers' or a partner, friend or family member.
- Find an empathetic and qualified teacher/instructor.
- Exercise in a recreational not medical setting (eg leisure centre, village hall).
- Find activities that you can access easily (within a maximum of 30 minutes travel time and at times convenient to you).
- Find affordable exercise.
- Find activities that enable you to socialise eg within centres that have a cafeteria or which have support or relaxation sessions or alternative therapies.
- Get involved with the planners – have your say!

An exercise programme IS within your reach, a few minutes each day really can make a big difference.

Exercising safely

Anyone with long-term pain should seek advice from his/her GP or physical therapist BEFORE a new exercise programme or activity. Remember, you will feel some discomfort when you start exercising which may last for a few days. Don't be put off though – it does not mean you are hurting yourself, you are using muscles that may not have been very active for a while.

Many people prefer to start a new activity with a friend for encouragement and moral support. If you prefer to exercise at home, make sure that you have plenty of space and are not likely to injure yourself on nearby furniture.

Wear clothing that is comfortable and will not restrict your movements and appropriate shoes such as trainers.

It is vital that you exercise safely. To do this you need to:

- start gently – it is not a good idea to launch straight into vigorous physical activity;
 - always warm-up first;
 - pace yourself – it is better to do small, regular amounts of exercise than a large amount at one time;
 - build up gradually;
 - cool-down afterwards.
-
- never force a movement or perform vigorous movements or repetitions;
 - never do things faster to challenge yourself;
 - never hold your breath;
 - there should be no pain during any exercise (although you may feel some mild discomfort, initially);
 - if sharp, severe or lasting pain is present during or after exercise stop and do not repeat;
 - If you have leg pain – as you improve you may notice that your leg pain 'centralises' ie it appears to move towards the spine. This is a good thing. If, on the other hand, your pain spreads to places further away from your spine eg into your leg or foot, you should stop this exercise and seek advice from your GP or physiotherapist.

Warning! High risk exercises

Some exercises can be termed 'high risk' because of the stress placed on the body. The damage that can result often shows up much later in life. The following exercises carry a high risk to the spine and should not be done as part of any exercise programme.

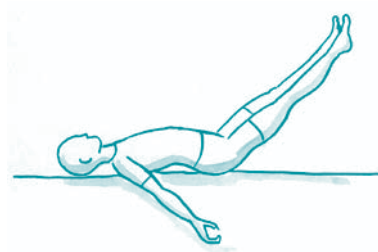
1. Bend to touch toes



2. Full neck rotation



3. Both legs raised



4. Crunches with hands behind head

(with your hands in this position you will place too much strain on your neck as you pull forwards)



5. Sit-ups with straight legs



Choosing a good exercise class

When thinking about starting a new activity, you should consider -

The class

- Choose a class suitable for your fitness level. If you are new to exercise, start with a beginners class, not an advanced session.
- The class should warm-up gradually, progress smoothly and finish with a cool-down.
- You should have the chance to ask for advice.

The setting

- A class can take place anywhere – from a community or church hall, or sports and leisure centre, through to adult education classes.
- There should be plenty of room for everyone and the teacher should be easily visible.
- Some venues may have a concrete or stone floor that can cause unnecessary jarring so avoid high impact activity like jumping or skipping. A hall with a wooden or sprung floor is best and mats should be used for floor exercises.
- The room should be well ventilated, but not draughty. If you are in a draught, you may become tense and this can affect the ability of the muscles to work properly.
- Music should not be so loud that you cannot hear the teacher's instructions.

The teacher

- Always make sure that your teacher has the appropriate qualifications or background and ask about this when you enquire about the class. You can also ask whether the teacher has taught others with back pain before.
- Look for a teacher who is friendly and interested in you, and who will ask newcomers about fitness levels and injuries.
- Do tell the teacher about your back pain at the start of the session so that they can give you the specific advice needed to help you get the most out of the class.
- The teacher should show you how to do each exercise safely and correctly, and

then give you time to practice. If any activity causes you discomfort, stop and ask for advice from your teacher.

■ Self-referral – studies show that people with chronic back pain should be encouraged to refer themselves onto a programme. Helping yourself to manage back pain is considered to be the best ‘treatment’ for a bad back. However, from time to time, self referred participants may turn up to an exercise class without having sought medical advice or may not have been cleared as safe to exercise by their GP. You should be asked to complete a special form (which has been devised by a health and exercise professional) to ascertain information about your back pain and general health. You would then be asked to visit your GP or other health professional to make sure that it is safe for you to exercise.

Where you may find a good exercise practitioner or teacher

The Register of Exercise Professionals (the largest qualification based professional body within the fitness industry) will tell you if your exercise practitioner has an approved qualification endorsed by the Government (www.exerciseregister.org/check-out-your-instructor.htm). This may be your local aerobics instructor who maybe registered as a ‘Level 2’ Registered Exercise Professional (REP) or you may find a ‘Level 3’ Advanced REP who has advanced qualifications for working with people with medical conditions such as osteoporosis or obesity.

London Central YMCA Fitness Industry Training is developing an instructor training programme at ‘Level 3’ to provide instructors with the skills and knowledge to deliver ‘ACTIVE BACK MANAGEMENT’ exercise sessions to people with back pain. These exercise instructors will work with a physical therapist or health care practitioner to make sure that the exercise is safe and appropriate. You will be able to locate these instructors on www.ymcafit.org.uk

BackCare, your local Primary Care Trust or Exercise Referral Programme, your GP or local leisure services department may be able to help you find a good practitioner who could offer you a good class.

Before the class:

■ don’t eat a large meal before exercising. A light carbohydrate snack (eg pasta, rice, bread, potatoes, couscous etc) two hours before a class will keep your energy levels up.

During the class, wear comfortable and appropriate clothing:

- correct shoes with cushioned soles such as trainers (some people find additional shock absorbing insoles in their shoes helpful);
- loose T-shirt;
- leggings/shorts;
- remove belts, large earrings, bracelets, pendants etc and empty the contents of your pockets, placing them out of the way;
- during floor work, use a mat and a rolled up towel if you need additional support.

Exercising – how much and what's best!

The UK Chief Medical Officer's report 'At Least Five A Week' (2004) recommends that for general health benefits, adults should exercise for at least 30 minutes a day of at least moderate intensity physical activity on five or more days of the week eg brisk walking is moderate exercise. To prevent obesity, 45-60 minutes of activity a day is needed.

To keep healthy bones adults should do 'activities that produce high physical stresses' on their bones eg dancing, brisk walking.

Older adults should do the same BUT should take particular care to keep moving and retain their mobility through everyday activity. They should do activities that improve strength, coordination and balance.

These activity levels can be achieved either by doing all the daily activity in one go or by building up 10 minute bouts throughout the day. Lifestyle activity, structured exercise or sport count!

For people with back pain all these recommendations apply. You should **move more often every day** to improve the physical condition of your body; stretch and strengthen muscles, mobilise joints, build your stamina and relax!

How OFTEN should you be physically active?

- After a bad episode of back pain – return to normal activity as soon as possible and keep doing normal activities as often as possible.

- Stay active and build up to doing five bouts (of 30 minutes) activity per week.
- Move more often – take the stairs; sit less often (no longer than 15 minutes at a time).
- Do bite size chunks of activity during the day (morning, break, afternoon, evening).

How HARD should you work?

Regular, controlled exercise can help build up your stamina, strength and suppleness as well as ease the pain. Build it up, gradually, from gentle to moderate intensity. You can do this safely, in your own time, at your own pace. When ready, challenge yourself to a little bit more, you will be so proud of your progress.

How LONG should you exercise for?

Build up to 30 minutes a day (2% of your day!). To lose weight, build up to 60-90 minutes a day (an active overweight person carries less health risk than a normal weight/thin non-active person).

What ACTIVITIES CAN you do?

There are many physical activities you can pursue with back pain. Now may be a chance to try something new! Many movement, exercise, fitness, sport, recreation and lifestyle activities at home, work or leisure are good for you.

The important message is, generally, to keep moving and keep the whole body agile, fit, flexible and strong.

Remember:

- **there is no single activity or exercise that you should do;**
- **no one exercise or activity provides the greatest benefit of all to you;**
- **if you are in 'good shape', you are more likely to recover from back pain more easily.**

Ideally, you should:

- **keep your heart and lungs strong and healthy** by doing regular aerobic activity which improves your stamina, raises your heart rate and improves your circulation and breathing. This exercise should make you a bit out of breath and build up a sweat eg walking, cycling, swimming, aqua-aerobics, salsa dancing, gym activity – exercise bike (upright and recumbent), treadmill and cross trainer (keeping your back upright and moving your body rhythmically);

- **keep your muscles and bones strong** by regularly strengthening your tummy, back, thighs and arms eg t'ai chi, pilates, weight-bearing floor exercises or exercises with light weights (performed safely with good technique);
- **keep your body flexible and mobile** by regularly stretching your muscles and mobilising your joints eg yoga, Alexander Technique;
- **keep moving about and doing your everyday activities** as much as possible eg washing, ironing, stair climbing, gardening, walking to the shops.

Using the **Alexander Technique** will help you do everyday activities with good coordination and minimal strain.

What activities are fun and good for people with back pain?

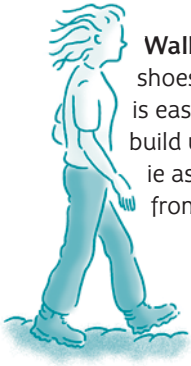
Hydrotherapy, ie exercising in warm water. Some local branches of BackCare run hydrotherapy sessions with a chartered physiotherapist. Find out your nearest branch by contacting BackCare. Your GP may be able to refer you to a physiotherapy department with access to hydrotherapy.

Swimming is generally excellent for people with back pain, although some people find the kicking action of breaststroke uncomfortable. Also, trying to keep your face out of the water, can strain your neck. Try backstroke, or if you like being on your front and don't mind getting your face wet, try breaststroke arm action and crawl legs.



Aquaerobics can be great fun and a good way to exercise your body with the support of water. You do not need to be a strong swimmer to enjoy these classes. Sessions are available at many leisure centres.

Group exercise. Some branches of BackCare have group exercise sessions in their local hall. Everyone who goes along either has back pain or has had it in the past. The exercises are designed to be done at your pace and you can also pick up all sorts of tips about managing your back pain from other people who know what it's like to have back pain. Other places offering exercise sessions include sports and leisure centres and local adult education centres. Your local physiotherapy department may have back classes (to which you will need to be referred by your GP). There are also videos available from BackCare.



Walking is usually one of the best forms of exercise. Wear comfortable shoes with cushioned soles and low heels and start on flat ground, as this is easier than rough or hilly areas. Start with a short walk and gradually build up the distance, ie pace yourself. If your back pain is 'gait' related – ie associated with the way you walk – a corrective shoe insert (available from chemists) may help.

Cycling. Using an exercise bike can be good general exercise. Adjust the bike so you are comfortable and are not overstretching your arms to reach the handlebars or your legs to reach the pedals or the ground. The handlebars should be just above waist level so you do not have to lean over and bend your back to reach them. If the handlebars are fully adjustable, bring them closer to your body. At first, try this exercise without adding any resistance. As you become stronger and fitter, you can increase the speed and distance that you 'cycle' and start to add resistance to make your leg muscles work harder. Road cycling is fine providing you can keep a back-friendly posture out on the road using upright handle bars.



Yoga. Part of the practice of yoga involves various 'postures' that gently stretch the soft tissues. Great emphasis is placed on breathing techniques. These postures improve flexibility, strength, circulation, and well being and reduce stress. If you are very flexible be careful not to over stretch.

T'ai chi is an ancient Chinese exercise system that involves a series of continuous, purposeful movements, performed slowly and gracefully. It combines physical, mental and spiritual aspects to gain muscular control of the body, whilst circulating the energy of life ('chi') through the body.

First aid exercises to help your back

1. Transversus abdominis exercise (also a STRENGTHENING exercise)
2. Multifidus exercise (also a STRENGTHENING exercise)
3. Passive extension exercise
4. Release/relief stretches for short term relief from pain, discomfort or tension

1. Transversus abdominis exercise

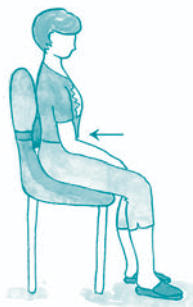
This is the deepest of your abdominal muscles. If you can use it well, it should act like a muscular corset.



Kneel on the floor, on all fours. You need to make sure that your shoulders are over your hands and your hips are over your knees, so that your back is flat.

Draw up your stomach, aiming to move your tummy button towards your spine. If you find this hard, pulling up and in with your pelvic floor muscles can help. It is not a large movement – you do not want the back to move at all. Don't forget to breathe normally! Hold for 10 seconds, then let go slowly. Repeat x 10.

NB You can do this exercise lying on your back, knees bent with feet on the floor AND as often as you like, when sitting, standing, before and during any activity or even in bed!



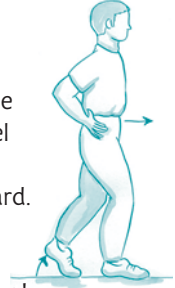
2. Multifidus exercise

This is a muscle that runs vertically on either side of your spine. It is important in helping to support your lower back.



Stand tall with one foot forward as if you are walking. Start with your weight on the back foot.

Tighten your stomach (as in the previous exercise). You might want to place your thumbs in your low back region, close to the spine. Slowly rock forward onto your front foot (your back heel will lift). To do this correctly, you should feel the movement coming from your back leg, as you push your weight forward. Hold this position for 10 seconds, then let go. Repeat x 10.



NB Once you have mastered this exercise, you can also do it while sitting!

3. Passive extension exercise

This is often useful if your back pain started while bending, eg when picking something up, sneezing etc. You should not do this exercise if your back pain has been diagnosed as a 'spondylolisthesis' (ie a slippage of one bone on another, not to be confused with a 'slipped disc'). Some people with facet joint problems or with a hollow or lordotic back may not find this exercise helpful. Check first with your GP or physical therapist.

Lie on your front, with your hands under your shoulders as if you were going to do a press-up. Keeping your pelvis on the floor, slowly push up with your arms. You may be able to push up onto your forearms. Slowly lower down to the starting position. Repeat x 10. As you become more supple, you may be able to just have your hands on the floor (rather than your forearms).



NB Try and keep your pubic bone in contact with the floor at all times and remember to breathe!

4. Release/relief stretches for short-term relief from pain, discomfort or tension

It is important to remember that doing the transversus abdominis exercise (page 18) before and during other exercise, may help relieve pain and discomfort.

Supine (lying on your back) stretches



Knees-chest (rock'n'roll) lower back stretch

Slowly hug your knee(s) into your chest and hold, hug further or increase the hold or rock forwards and backwards or side to side, keeping your head on the floor.

Lying on your back – long back stretch

Lengthen/stretch your body and slowly extend your arms behind your head. Draw in your tummy muscles and stretch your body feeling as if your hips are moving as far away from your shoulders as possible.



Forward kneeling stretches (knees permitting)

Lower/mid back stretch (arms forward)

Kneel and place your forehead on the floor, arms placed in front of the shoulders, palms down. Hold the stretch or slide hands forward to increase the stretch whilst breathing out, relax.



Lower/mid back and relaxation stretch (in yoga – 'pose of a child')

Kneel and place your forehead on the floor, arms placed by the side of your body, backs of hands on the floor. Drop your shoulders, breathe out and relax.



Standing back relaxation (against a wall)



Standing with your back facing the wall.

Let the wall take your weight by slowly leaning back until your shoulder blades and base of your spine are against the wall. Draw in your lower tummy muscles. Adjust your feet and bend or straighten your legs until your lower back is comfortably 'sitting' against the wall. Drop your shoulders, breathe out and relax.

Warming-up

The purpose of a warm-up is to prepare the body for activity (raising your pulse, getting you warm and mobilising your joints which will lessen the likelihood of injury). While warming up, wear an extra layer of clothing eg a sweatshirt or tracksuit. Once you are thoroughly warm, this can easily be removed.

The vigour and length of your warm-up depends on what activity you are about to do.

Before doing exercise:

- 'limber up' for about 5-10 minutes with activities such as walking on the spot, while gradually increasing the height you lift your knees, gently bending and straightening your legs;
- gently mobilise your shoulders (forwards then backwards) and hips (gentle circling);
- very gently stretch the muscles you will be working for 6-10 seconds (your calves, backs of arms and thighs (front, back and sides).

Warm-up stretches

Calf stretch – (back of leg, below knee)

Stand facing a wall, with your hands lightly resting flat on the wall, at about shoulder height. One foot forward in a lunging position.

Keeping both heels on the floor, bend the front knee. (You will feel the stretch in the calf of the back leg). Make sure that you keep your body upright (ie don't stick your bottom out!). To stretch the deeper calf muscle, you can bend the back knee so that you are 'sitting down' with your weight over the back leg. (You should still feel the stretch in the calf of the back leg.) Repeat with the other leg forward.



Back of arm stretch (triceps stretch)



Stand facing forwards, feet hip width apart. Arms down by your side.

Bend your right elbow and place your right hand on your left shoulder. Place left hand cupped under your right elbow so it supports your elbow. Move the left hand a little way up the back of the right arm pushing your elbow towards your left shoulder. This stretches the triceps muscle at the back of the arm. Breathe out as you stretch holding the stretch for six seconds. Release the arm and give a little shake. Repeat for left arm.

Front thigh stretch (quadriceps stretch)

Stand next to a wall sideways on, placing your left hand on the wall for support with your elbow slightly bent.

Make sure you are close enough to the wall to feel steady and upright. Keeping your S shape spine and tucked in tummy, lift the right heel off the floor up towards your buttocks. Hold this heel lift where comfortable bending your left knee gently as your left leg bears the weight. You will be gently stretching the front of your right thigh. Hold for six seconds breathing gently.

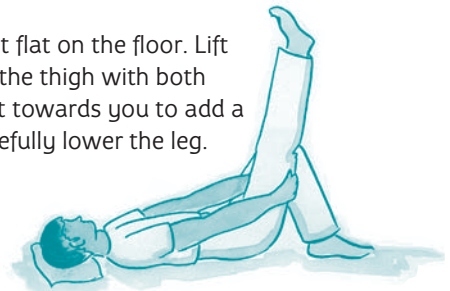


More advanced version: once you have lifted the heel off the floor, try to pull your heel towards your buttocks. Do not arch your back with this exercise. If you cannot reach your ankle, you can use a towel to help. Carefully release the leg. Repeat for left leg with your right shoulder next to the wall.

Back thigh (hamstring) stretch

Lie on your back with your knees bent and feet flat on the floor. Lift one knee towards your chest, support behind the thigh with both hands. Fully straighten your leg. Flex your foot towards you to add a stretch for the calf. Hold for 6-10 seconds. Carefully lower the leg. Repeat with the other leg (x 2 each side).

NB If you cannot reach to hold behind your thigh use a towel to help (see page 32).



Neck mobility

You should only attempt the following exercises if you have no dizziness, no double vision and no difficulties breathing or swallowing. Although you may feel a stretch while doing these exercises, you should not experience any pain.

Neck rotation exercise

Lying on your back, knees bent, feet on floor. Head on firm, small pillow. Slowly turn your head to the right until you feel a stretch. Hold for a count of three. Slowly return to the starting position. Repeat to the left side. Repeat x 5 to each side.



NB Make sure you keep your shoulders still. (People often turn their shoulders too, which is cheating!)

Neck side bending exercise

Lie on your back with your head on a firm, small cushion. You can bend your knees up if this is more comfortable for your lower back. (In this position, the neck muscles will be more relaxed than when sitting, as they do not have to work against gravity.)

Tilt your head over so that you are trying to get your right ear towards your right shoulder. Make sure you keep looking up at the ceiling, tilting your head to the side but not rotating it. Hold for a count of three. Slowly come back to the starting position. Repeat to the left side. Repeat x 5 to each side.



Neck/shoulder lower trapezium exercise

Many people get discomfort in the back of the neck through over-using the muscle at the top of the spine. You can retrain your shoulder blades to move in a way that avoids this strain.

Sit with your hands in your lap.

Pull your shoulders down as if they have a heavy weight on them. Gently and slowly draw your shoulder blades slightly back (as if you were going to brace them together). Keep the downward pull on while doing this. Hold for 10 seconds. Slowly let go. Repeat x 10.

NB The gentle back movement of the shoulder blades is a very small movement. If you brace your shoulders back too vigorously, you are unlikely to get any benefit from this exercise. Once you have mastered this exercise, you can do it anywhere, in any starting position, eg while waiting at traffic lights or at the supermarket checkout etc.



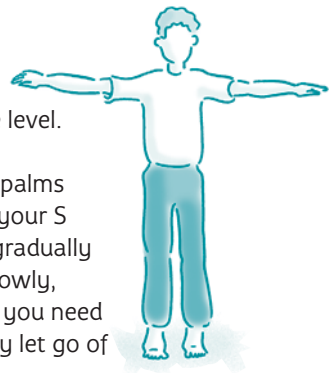
Finding your balance

People with back pain can lose their confidence trying to keep their balance when moving about or when being still. It is important to practice balancing as there are many occasions when you have to balance in every day life eg when standing up, when unloading a washing machine or when removing items from a shopping trolley.

Tip-toes balance

Stand with feet hip width apart, eyes focussed on the floor approximately one metre away or in front, at eye level.

Raise your arms out from your sides to shoulder level, palms down. Draw in lower abdominal muscles, maintaining your S shape spine and lift up on to toes. Hold your balance, gradually increasing the hold for 6-10 seconds. Lower yourself slowly, retaining control and posture, breathe out and relax. If you need support, hold onto a wall or (stable) chair and gradually let go of the support when you are more confident.



Eagle/bird balance

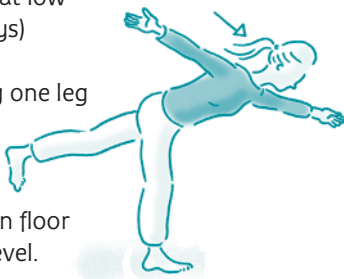


Stand with feet hip width apart, eyes focussed on the floor approximately one metre away or in front, at eye level.

Raise arms out from your sides to shoulder level, palms down. Draw in lower abdominal muscles, maintaining your S shape spine and lift one foot off the floor, bending the other knee and (if possible) placing the sole of your left foot against the shin of the opposite leg or on top of the opposite thigh. Hold your balance, gradually increasing the hold for 6-10 seconds. Lower yourself slowly, retaining control and posture, breathe out and relax. If you need support, hold onto a wall or (stable) chair and gradually let go of the support when you are more confident.

Golfer's balance (helps when reaching for things at low levels or when lifting contents from shopping trolleys)

Imagine a golfer leaning on his/her putter and lifting one leg behind them whilst retrieving a golf ball from the hole.



Standing with feet hip width apart. Eyes focussed on floor approximately one metre away or in front, at eye level.

Raise arms out from your sides to shoulder level, palms down. Draw in lower abdominal muscles, keeping your S shape spine. Bear weight on your right leg and from the hip, lift a straight left leg backwards so that you keep your S shape spine and balance. Gradually tip the body forwards until you are balancing horizontally for six seconds. Return to standing slowly, retaining control and posture, breathe out and relax.

Eventually, aim to balance in full horizontal position for up to 10 seconds, maintaining your S shape spine, as if you were retrieving the golf ball or shopping from a trolley!

Strengthening and toning

We need to strengthen ALL our major muscles (arms, back, abdomen, legs/thighs) as in everyday activity our body has to have the strength and the muscular endurance to work against gravity eg to stand up from sitting and to lift, hold and carry our body and any other weight eg shopping or children. We tone to keep the muscles looking good!

When our muscles get weak and out of condition, other body parts start to bear the load eg knees. We fall into bad habits, develop bad posture, and then we get a bad back! Eg we do not use our thighs to squat and pick something up (this requires a lot of strength, effort and balance), instead we round our backs and bend from the waist so over stretching our back ligaments and muscles, time and time again.

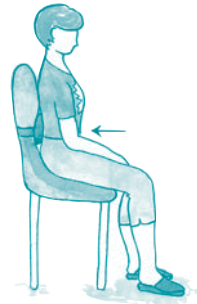
When doing any strengthening exercises:

- get to know which exercises and positions suit you;
- get to know (and work at) your own pace and ability;
- exercise one muscle group then another (eg tummy, then back, then arms etc) then you don't get stuck in one position;
- ask your instructor to give you an alternative (weight-bearing) position if your back doesn't like performing an exercise in one particular position. Eg if you are unable to perform a back strengthening exercise lying on your tummy (raising your back from the floor), try sitting and straightening your back, holding the straight back for a few seconds before relaxing (sitting back strengthening exercise);
- never hold your breath;
- never force a movement or perform vigorous, movements or repetitions;
- never use speed to make the exercise more challenging; better to gradually increase the number of times you do the exercise (repetitions) or the length of time you hold a position for;
- if using weights, keep the weight LOW and do high repetitions initially. Increase WEIGHT when your back is stronger, is pain free and you feel confident to do so;
- aim for one SET of 8-12 reps or until you tire; you can increase the SETS (up to three) when ready 1-3 x per week;
- there should be no pain during any exercise (although you may feel some mild discomfort initially);

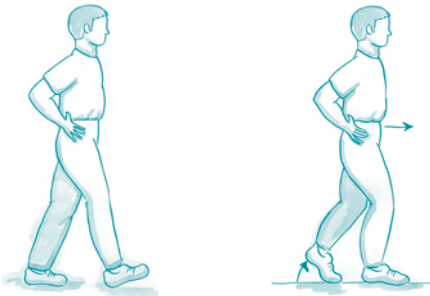
- relieve discomfort or tension by wriggling or exhaling or by moving out of the movement, relax then repeat the exercise;
- before beginning an exercise, inhale (through the nose) and exhale (through the mouth) as you start the exercise;
- keep your S shape spine at all times;
- use cushions, folded towels and mats to support and protect you;
- after exercise, perform a contrasting movement (eg after straightening your back round your back, for example, by lying on your back and hugging your knees into your chest);
- if you have been holding a static position, move about or gently rock side to side on your back.

Strength exercises

Tummy strengthening – abdominal hollowing **transversus abdominis exercise** (see page 18).



Back strengthening – isolated lumbar multifidus exercise (see page 19).



Trunk lift

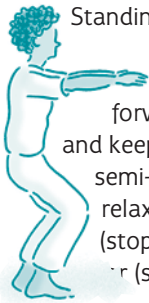
Lying on your tummy (face down).



Arms by your side, backs of hand and forehead placed on the floor. Breathe in, squeeze buttocks, breathe out and slowly lift your trunk (eyes looking down and keeping stomach in contact with the floor so that extension is from the lumbar spine, not from the hips). Hold for six seconds. Slowly lower your body to the floor; repeat 6-10 reps increasing the 'hold' by one second every time. Stretch your back afterwards the opposite way eg forward kneeling stretches or supine, knees to chest stretch (see page 20).

Semi-squat – thigh/buttock strengthening (important when lifting and bending)

Standing free or with back supported against a wall.



Stand with feet hip width apart, facing forwards. Raise arms forwards and up to shoulder level, drawing in lower abdominal muscles and keeping your S shape spine. Slowly bend your knees, sinking down into a semi-squat and hold for 10 seconds, breathing. Return to standing and relax. Repeat 4-6 reps, increasing the 'hold' by two seconds each time (stop when your muscles feel tired). If you need support, hold onto a wall or (stable) chair.

Arm strengthening-easy press-up

Kneel on all fours. Hands placed under your shoulders, knees hips width apart; your body evenly balanced over your hands and knees and your back straight (not dipped) with tummy 'hollowed' (abdominal hollowing).



Gently, bend your elbows, lower your chin towards the floor and push up to starting position. Repeat building up from 5-10 times. Then sit up, relax, change your body position if need and shake your arms to loosen your wrists and shoulders.

Cooling down

Make time to cool down properly and to get your body back to normal. If you just sit down and do nothing after exercise, the muscles you have been using will tighten up and blood may pool in your feet if you suddenly stop after a vigorous bout of activity causing you to feel faint.

- It is a good idea to put your warm-up clothing back on when you are doing your cool down.
- Gradually work through the exercises that you did in your warm-up, but in the opposite order so that you finish with walking on the spot.
- The cool-down should last about five minutes depending on how active you have been.
- Once you have completed the cool-down, you are fit for the stretches!

Stretching

Your muscles tend to tighten if they are not used. Stretching helps us to feel good and improves the flexibility of our muscles and mobility of our joints. It is important to do your stretches at the end of your exercise programme when your muscles are thoroughly warmed up, after or as a part of your cool down.

- Remember to stretch both sides of the body.
- Stretch regularly – preferably every day, this will help relieve discomfort too.
- Stretch all major muscle groups (see pages 31-32).
- Rotate your muscle groups and change body positions eg don't keep doing one stretch after another on your back, you will stiffen up.
- Never force a movement. This will result in spasm, pain and tissue damage.

- As you slowly stretch, you should feel a comfortable tightening within the muscle. There should be no pain.
- As you reach the limit of your stretch, breathe out. This will help you to relax into the stretch (and helps you to stop holding your breath, which often happens!)
- Do not 'bounce' at the end of the stretch just maintain a slow, comfortable stretch for 15-30 seconds, gradually increasing the amount of time you stretch.
- Repeat each stretch three times slowly!

Relieve discomfort in stretching by:

- finding an alternative starting position if you are unable to bear weight in that position eg do a lower back stretch (lying on your back), if you are unable to stretch your lower back in a forward kneeling position);
- inhale (through the nose) before beginning a stretch and exhale (through the mouth) when relaxing into the stretch;
- mentally aim to relax when stretching;
- be aware of tension developing anywhere in the body when you stretch eg tightening up your shoulders, locking your jaw or holding your breath;
- relieve the tension by wriggling joints, by exhaling, by visualising warmth or positive imagery, by moving out of the stretch, by relaxing then repeating the stretch;
- ensure you keep your S shape spine and you are stable throughout the stretch;
- use equipment to support you and place in appropriate positions eg cushions for your head or to place under your knees to stop you overarching your spine or towels for warmth and mats;
- after stretching, perform a contrasting/opposing movement, eg after your (lying on your back) hamstring stretch, hug your knees into your chest, breathing out or rock side to side.

Stretches

Cat stretch

Pelvic tilting exercise

On the floor, on all fours. You need to make sure that your shoulders are over your hands and your hips are over your knees, so that your back is flat.



Let your tummy sag towards the floor as you gently arch your back. Your head will probably want to lift up slightly. Now lower your head and look at the floor, as you hunch your back upwards. Gently move from arching to hunching, smoothly 10 times.

NB This exercise, in this starting position, is not recommended if you are pregnant.

Lower back stretch

Lie on your back with your knees bent and feet flat on the floor.



Lift your right knee up to your chest. Grasp your knee with your hands but don't press on the knee cap. (If you have knee pain, it may be more comfortable to hold under the knee). Hold for a count of three. Slowly let the leg go back to the starting position. Repeat with the left leg.

Repeat x 5 each side.

Knee drops

Lie on your back with your knees bent and feet flat on the floor.

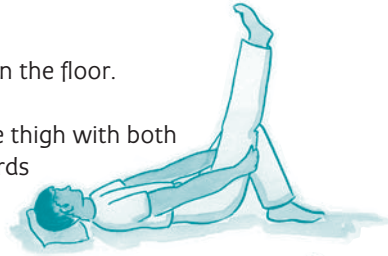


Keeping your knees together, gently lower your knees over to the right side. You must keep your shoulders on the floor at all times, as you want to have an effect on the low back. Slowly bring your knees back up to the starting position. Gently lower them over to the left side. Repeat x 5 each side.

Hamstrings (back of thigh)

Lie on your back with your knees bent and feet flat on the floor.

Lift one knee towards your chest. Support behind the thigh with both hands. Fully straighten your leg. Flex your foot towards you to add a stretch for the calf. Hold for 15-30 seconds. Carefully lower the leg. Repeat with the other leg (x 3 each side)



NB If you cannot reach to hold behind your thigh, you may find using a towel helpful.



Quadriceps (front of thigh)

Lie on your left side. Bend your right knee and hold your ankle with your right hand. Keep your balance by resting your head on your left arm stretched above your head, by abdominal hollowing and by making sure your right knee and hip are in line. You then won't over arch. Try to pull your heel towards your buttocks. If you cannot reach your ankle, you can use a towel to help. Carefully release the leg. Repeat lying on your right side, stretching your left thigh. Hold the stretch for 6-10 seconds.



Mid-spine stretch



On the floor, on all fours. You need to make sure that your shoulders are over your hands and your hips are over your knees, so that your back is flat.

Keeping your hands firmly in place on the floor, smoothly sit back on your heels. You should feel the stretch between your shoulders and down the middle of your back.



Everyday activities - how best to do them!

Why change the way you do things?

People with back pain should modify their everyday activities so that they can move safely, stay active and keep fit! When you learn to modify activities, you won't be afraid of doing anything as you will be able to keep the right posture at all times.

You will realise that **you can still do many daily tasks and activities** at home and at **work!** **You will become a 'can do' person!**

This positivity and new found confidence will help you to stay at work, minimise pain, risk and injury and will help you to recover from injury or illness more quickly so that you can have a better life.

What you must remember to do

1. Recognise what is good for your back and what aggravates it

- If you know that specific support, equipment or activities are best for your back, ensure that you access them.
- If you know that sitting for a long time aggravates your back, plan to get up and move around occasionally.
- If you know that standing still for a long time aggravates your back, move off the spot or sway side to side on your feet.

2. Plan ahead, thinking about what you will be doing

- When you know that you will be sitting at a computer for a long time, find a reason to get up and move.
- Keep the phone away from you, you'll then HAVE to move to get it!
- Use small cups/glasses for drinks so that you have to get up to make more drinks, more often. You will also have to get up and go to the loo more often!
- Put on washing when you're working at the PC, at home, so you have to get up and put it in the dryer.
- Notice when you're feeling stiff or sore. Then move about or do your 'relief/release' stretches.

3. Seek help if you need it or are in doubt

If you need advice or support from your Doctor or therapist or moral or physical support from your colleagues/employers, let them know.

4. Do not stay in one position for too long

Change your body position frequently eg sitting, standing or lying for no longer than 10-15 minutes.

5. Change the activity or your posture

- If a standing hamstring stretch aggravates your back, then do the same stretch lying on your back.
- If bending over to dry your legs aggravates your back, raise one leg at a time, placing it onto a bench or bath top.
- When having to turn around, move your feet rather than twist your body.
- When cleaning the bath, kneel with your trunk close up to the bath rather than stoop and stand.

6. Change the situation or the environment

- If you are at a dinner party where you may have to sit at a table for two hours or more, use extra support, adjust your posture or change the chair and wriggle your bottom frequently!
- Find a reason to get up and move about: go to the loo, move to sit next to someone else, go and help with the dishes or go and look at a picture on the wall!
- Remove your shoes under the table, roll your ankles and stretch your feet.
- If you are at a conference (where you may have to sit on inappropriate chairs for many hours); use extra support (eg place your bag behind your back) and adjust your posture; wriggle your bottom in your seat; curl then stretch your spine; shift the weight from one buttock to another; get up and stretch when possible and go for a walk during breaks. Use a painkiller, if necessary, to take the edge off the pain NOT to block it out completely so that you can carry on regardless. Take a low dose regularly.

7. Modify equipment and clothing

- Use a bag, if you have no cushion or other lumbar support to give extra support behind your lower back.
- If seated in a deep chair in a restaurant, move the chair closer to the table and move yourself forwards on the chair placing your bag behind your back.
- Turn a chair around backwards so that you can straddle the seat (if possible!), the back of the chair will support your trunk.

- Use a lightweight vacuum cleaner that has an adjustable handle which you can keep close to your tummy so that you remain upright.
- Avoid tight jeans and high heels.
- It may be easier to put on stockings rather than tights.

8. At all times, keep an S shaped spine, your natural curves

- Avoid over rounding (flexion) or over arching (extension) your back.
- Abdominal hollow at all times.
- Keep your natural S curves, lengthen your spine and avoid stooping when sitting. Use lumbar (lower back) support.
- When vacuuming (to keep your S- shape spine), keep upright and close to the vacuum or kneel on one knee, if you can.

9. Try and relax! Whenever you do anything

- Breathe.
- Visualise your self achieving (doing it!).
- Distract your worries and think of something that eases you.
- Remember when you did an activity before without hurting yourself.
- Abdominal hollow.
- Do your 'release/relief' stretches afterwards.
- Put on music or something that relaxes you eg candles.

How to adapt your everyday activities

Sitting

- Sit no longer than 15-30 minutes or so, according to comfort.
- Your chair back should be at an angle of 110°-115° to the horizontal keeping the spine upright. Chairs should support your body. Air filled cushions or sitting on Swiss balls help you to keep your S curves whilst sitting. This is called 'Active' seating.
- Firm, high and shallow seats are better. Seat depth should be shorter than thigh length. If a seat is too deep, use lumbar support (cushions, lumbar roll). On any chair, do not allow your back to slump.
- Your hips should be back into the chair. Feet should rest on the floor or footrest. Hips should be at least 10 cm higher than knees.
- To reduce the stress of sitting, turn the chair around backwards and straddle the seat.
- Sitting in front of the computer, the eyes should be level with the top of the screen when sitting up straight with bifocal spectacles (if worn) adjusted to a comfortable neck position.

- When sitting and working, choose a chair and table that can be adjusted to your height.
- Position materials that enable you to sit upright. Be able to rest forearms on the table so that they can support your upper body weight without you having to bend forwards.
- To get up from the chair, move your bottom towards the edge of the chair, push down on arm rests to lift yourself upwards or (if no arm rests) place one foot forwards and push upwards through the thighs whilst you are tucking your tummy in (abdominal hollowing).
- Get up to change TV channels or to get the remote control (keep it away from you!).

Relaxation tips for sitting to reduce pain or discomfort

- Roll your ankles, point and flex toes, lift heels and push down onto toes and vice versa.
- Breathe in through the nose and out through the mouth.
- Lower shoulder blades towards your waist or roll your shoulders forward and back a few times.
- With your arms at your sides or on your lap, tilt your neck to the right, return to centre then tilt to the left. Drop chin towards chest then raise.
- Move your bottom back in the seat and rock onto one buttock, then onto the other.
- Curl then straighten your lower back.
- Squeeze buttocks together then relax.



Caution – sitting up in bed, to watch TV or to read a book, strains the back

Standing

- Stand with your head over your shoulders, shoulders over hips, hips over ankles.
- Stand with firm wide base, knees slightly bent. Lower shoulder blades to ease upper body tension.
- Lengthen your trunk and neck, lift your chest upward and forwards.
- Abdominal hollow and keep your natural S curves.
- Ensure that any worktop is an appropriate height and enables you to remain upright so that you can keep your natural S shaped spine.



- Wear flat, ankle supporting, soft-soled shoes.
- Use relaxation activities if you have to stand for long periods (see opposite for sitting and pages 40-43).

Caution – standing slumped with head forwards stresses the back and neck

Lying/sleeping/resting

- Lying down for 10-15 minutes (cushion under head), daily, with knees bent may help settle your back.
- A bed should support the spine, keeping the natural curves and should be neither too hard nor too soft.
- Lie on a pillow that supports neck and head only (not shoulders).
- If side lying, ensure your head remains in line with the spine on the pillow (a rolled up towel in the pillowcase may give extra support).
- If there is leg pain, lie on the pain free side with a pillow between the legs.
- Side sleeping, keep your lower leg almost straight and bend your top leg; place a pillow under the knees if needed.
- To get into bed, abdominal hollow whilst sitting on the edge of the bed, then slowly lower your upper body sideways leaning on the arm closest to the bed, bending your knees and bringing your legs and feet up onto the bed with control.
- To get out of bed (sideways) roll onto your side into a foetal position. Relax keeping your knees bent (or straighten your bottom leg if necessary). Abdominal hollow and move one leg over the bedside, then the other, pushing your body upwards using your arms. Keep your feet near to the bed and push up using your thighs (or your hands pushing against your thighs or use the back of a chair or a person if extra support is needed).
- To get out of bed (from lying on your back) bend your knees and place your feet on the bed. Place your hands by your hips, palms down and push up to sitting. Swivel around so that you face the side of the bed. Shuffle your bottom towards the edge of the bed and place your feet on the floor close to the bed. With your hands beside you push up to standing using the thighs, head raising last of all to prevent dizziness.

Caution - bed rest is not best for your back!

Bending

If you have to bend to the floor, keep the back upright and abdominal hollow, bend at the knees to squat down or with support, bend one knee and put the other knee on the floor.

If you have to bend, bend at the hips, keeping your natural spinal curves. For example, cleaning under tables or chairs – abdominal hollow, bend one knee to crouch down, keeping your back upright. Then bend forward at the hips and kneel (on all fours, knees permitting), keeping your natural S shaped spine.

Lifting and carrying

- The back and abdominal muscles are meant to keep your trunk stable, they are 'postural partners' and are NOT meant for lifting, contrary to popular belief!
- Lifting should be performed using your hip and leg muscles (thighs).
- When possible avoid lifting and carrying heavy loads.
- Assess the necessity and your capacity to lift safely. Ask yourself: 'do I need to lift this?'; 'can I lift this without over stretching or straining myself?'; 'can I lift this without losing my balance or my S curves?!'
- Plan your lifting and remove all hazards.
- Always keep the object close to your body. Keep your natural S shape and a stable spine at all times. Bend your knees not your back. Push up using your thighs. Do not reach forwards. Move close to the object.
- Before lifting anything, kneel on one knee with the other foot flat on the floor. Adopt a wide stable base (place your knee and foot -or both feet- about hip width apart).
- Abdominal hollow and breathe when lifting.
- Turn feet and don't twist when lifting.
- Try and lift with smooth movements.
- When picking up a young child, encourage the child to come to you so that your back stays upright. Place one foot in front of the other bending at your knees. Keep your elbows tucked in carrying the child close to your body, both your centres of gravity touching (ie belly buttons!). Put the child down as carefully as you picked him/her up.



Golfers lift

Imagine a golfer who leans on their putter and lifts one leg behind whilst retrieving the ball from the hole. This is a useful lift when you have to lift light objects and when there is solid support eg when placing shopping in or lifting shopping from a trolley. This type of lift stops you from forward bending at the waist, helps you to keep your natural S curves and minimises stress to the back.



When shopping use shallow trolleys if possible.

Hold onto your trolley with your right hand. Abdominal hollow. Stand on your right leg and bend at the hips, keeping your natural S curves and gently lift a straight left leg behind you as you lift your shopping from the trolley. If one side of your back is weak, lift and straighten the leg of your weak side which will keep your spine neutral and stable.

Other everyday activities which you may need to modify

Remember – keep your S curves at all times!

Bathing and personal care

Drying yourself after a shower or bath

When reaching up for a towel, move your trunk close to the towel or shelf and draw in your navel to spine, keeping your balance. Avoid putting things in extremely high places.

Drying feet and legs

With a bent knee, raise your foot onto a stool, chair or bath, making sure that you can keep your balance and your natural curves so avoiding stooping.

Drying your neck and shoulders or reaching above your waist

Keep your S curves, abdominal hollow and raise one foot onto a foot stool or step.

Making the bed

Either **kneel on one or two knees** with your trunk and hips close to the bed and be prepared to move to each side of the bed to tuck the sheet in rather than reach across the bed

or

Stand, keeping your S curves with one leg extended (as in the **golfer's lift**). Avoid stooping and bending the back.



Car activities: cleaning the car; driving; getting into/out of a car; loading/unloading a car; repairing the engine.

Cleaning activities: dusting; sweeping; vacuuming.

Gardening activities: digging; mowing; planting.

Kitchen activities: reaching from an oven or from a cupboard; washing up; loading/unloading a washing machine.



Relaxation

Learning to relax through active back care can help you benefit even more from exercise and it will help you and your back! You must care for yourself as a person and not just treat the spine!

Exercise or activity will help you to relax:

- by encouraging the release of endorphins or 'happy hormones' which are natural pain killers and mood enhancers;
- by increasing your circulation and body temperature;
- by distracting you from your problems and encouraging positive thoughts and actions.

After learning to relax through active back care you will:

- stay mobile and become more active;
- be better able to carry out your everyday activities;
- be more confident and have less fear of moving;
- be better able to manage your back;
- be able to stay at work or return earlier;
- feel better!

Tension in back pain

We know that stress and tension are a product and cause of back pain. Recognising tension and relaxing when moving or exercising (and when doing your everyday activities) are key 'tools' for active back care.

You must learn to recognise **your** signs of tension so that you can ease them. These may be:

Aural signs (what you may hear):

- verbally expressed fears;
- breathlessness.

Visual signs (what you may see):

- inward posture (head lowered, curling up in a shell);
- eyes looking downward;
- stiffness;
- frailty;
- slow, tense, movement;
- lack of mobility (not being able to move limbs fully);
- poor agility (nervous about or not being able to change body positions easily);
- a pale or flushed complexion.

Kinaesthetic signs (what you may feel):

- cold or sweaty hands or skin;
- lumpy, hard muscle.

Behavioural signs (what you may notice):

- withdrawn (quiet, not interacting) behaviour;
- hyper-active behaviour (loud, persistent, fast talking);
- anxiety.

Mental, physical and sensory relaxation strategies

You can physically relax by:

- moving the whole body rhythmically eg rocking, rolling, wriggling, arm swinging and circling, t'ai chi, aqua-aerobics, dancing;
- low impact movement (walking, cycling, swimming, using a 'free runner', or cross-trainer in the gym, salsa dancing);
- contrasting tension and weight in movement eg soft arm sweeps from side to side or strong forward arm punches, then letting your arms flop (perhaps using imagery to induce the effect, eg imagine you are pushing a wall or a ceiling);
- transferring your weight (moving your body from one weight bearing position to another) eg side swaying from one foot to another or when sitting, rocking from one buttock to the other;
- doing opposing movements eg stretching then bending (stretching high then curling);
- abdominal hollowing;
- doing your 'release/relief' stretches eg supine knees to chest stretch (see page 20);
- breathing before, during and after activity – inhale (breathe in) before you start an exercise, then exhale (breathe out) during the exercise. This helps the mind and body to relax and can help whilst exercising which makes you tense and unsafe;
- progressive relaxation ie tensing then relaxing muscles. Caution – **this must be supervised**. The 'tension' aspects may not be appropriate for some people with back pain because already tight/tense muscles may need to loosen rather than tighten;
- autogenics – contrasting weight in stillness (eg using imagery and thinking of your body or a body part feeling heavy, like lead; thinking of your body or a body part floating). This is taught by a qualified teacher.

You can mentally relax by:

- visualisation (use of positive images, personal choices, eg sunny beach, field of lavender, imagine you successfully doing...);
- distraction (think of a poem; repeat a number sequence; think of the last time you had a fun evening, think about what made it good; do something that you enjoy that frees you from worries and challenges);

- thinking positively (think of something that you achieved for the first time today, something which you know you can do now, eg “I moved from sitting to lying on my back using my tummy muscles and hands for support” or “I walked on the treadmill without hurting myself” or “I vacuumed the hall today without aggravating my back!”).

You can relax using SENSORY STIMULI by:

- using music or sound. There are many excellent relaxation tapes available. Some tapes use the spoken word to guide you; others use imagery and soothing music or sounds;
- using heat or a thermogenic response (hot water bottles wrapped in thick towels to avoid burns, blankets, tops, comfortable mats);
- using subdued lighting, mood enhancing, visual images (peaceful colours, pictures);
- using touch:
 - massage – a professional massage can be really helpful if you have muscle spasm but be sure to tell your practitioner about your back pain first;
 - comfort textures (silk, velvet);
 - touch therapy (stroking/holding animals eg rabbits, dogs, cats).
- using taste and smell:
 - use of herbs or Aromatherapy which should only be recommended by a trained Aromatherapist;
 - comfort foods or drinks eg hot or herbal drinks, wine).

Mind over matter – the story of an active back carer

This is a true story of how Judy (a 53-year-old woman with simple back pain) helped to improve her quality of life through active back care and through working with an exercise instructor.

Judy's health history

Judy ate healthily and took supplements and was interested in Devil's Claw and Arnica as natural anti-inflammatory remedies. Judy did not smoke. A physician diagnosed wear and tear of one facet joint, right iliac/sacral and stiffness in the facet area. The problem started 18 months before seeing the exercise instructor and the physician recommended avoiding hyperextension (over arching her back). The instructor thought that her posture was good.

Judy's (initial) state of mind

"It's mastered me, I'm not living". Judy expressed her fear of back pain always being there. She seemed distressed at feeling depressed because she thought it was going to be with her forever and was frustrated that it wasn't curable. Initially, she kept talking about the negative side of it all. She seemed to be grieving over the loss of her perfect health and had lost her sense of control.

Her husband had back pain too. Judy criticised him for moaning about his pain and seemed upset that he showed little empathy and support for her. "He thinks that I make a mountain out of a mole hill compared to what I have to put up with." He told her that he "doesn't need exercise and he's found a way to live with it".

Judy loved her job (piano teacher four nights a week 3.30-9.00 pm with breaks). For her work, she had special cushions and wanted to know how she could modify her sitting, standing and listening. Judy seemed to be a 'coper' as she wanted to do something positive about her back pain.

Judy's physical activity, exercise and work

Judy went to a gym to do pilates on Tuesdays and Thursdays for one-hour classes. She wanted to use the gym equipment but was afraid she would hurt herself. She wanted help with this. Judy had an Alexander Technique session once a month and

cycled occasionally to the shops. She walked as frequently as possible but got lazy if she didn't get up early.

Judy did housework but tried to do it less frequently as it aggravated her back (she needed to know how to modify: getting things out of the fridge/oven, loading the washing machine, reaching up in cupboards, vacuuming, getting out of chairs, cleaning the bath and how to teach piano lessons sitting, standing, lying on the couch). Judy said "It doesn't like me doing this sort of movement (over arching)."

The active back care that Judy wanted (her personal preferences)

"My day is my free time but it's just doing chores. In my free time I want a productive day (to get on top of my back). I want a reason to get up. I want a half hour programme that I can do at home. I want you to tell me to do this number of this and that number of that and then I want to go to the gym when I'm feeling more confident."

Judy, also, wanted to know how to cope with her back pain and what to do if it came back.

"I can feel it coming back mid morning but when I get up my back is free of pain". She said that she needed to do something 'big' to get on top of her back pain, like changing her career or having another interest.

She also wanted to help others with back pain through something positive. She had asked for details of exercise instructor courses.

Judy's self – made physical goals

- Read exercise sheet (given to her).
- Stretch daily/strengthen alternate days.
- Walk 30 minutes 3x/week.
- Cycle 2x/week.

Judy's self – made mind goals

- I am going to get up early.
- I will find out about a new career or hobby.
- I will find out what I can do to reduce my pain if it comes later in the day.

Judy's active back care plan

Her shopping list

Judy needed to:

- modify specific every day activities; getting things out of fridge/oven and loading washing machine; reaching up in cupboards; hovering; getting out of chairs; cleaning bath; how to teach piano lessons, sitting, standing, lying on couch;
- have information to help her think about changing her job and hobby;
- be encouraged to make these changes;
- have ideas to manage her pain (NSAIDS, ice, heat, release/relief exercises);
- try showing her husband some release/relief exercises;
- avoid negative talk but to focus on positive thinking, actions and words;
- change the way she did things, to help her cope, not talk about doing them;
- focus on achievements and to look forwards rather than backwards;
- keep up her healthy eating;
- enjoy a social life;
- try regular relaxation strategies and seek advice for her depression;
- keep as active as possible and reduce her sedentary periods in the day;

Judy's activity preferences and personal goals

Pilates 2x/week, Alexander Technique, cycle, walk, a half hour programme at home, (wanted to see and measure progress) then go to the gym when more confident. Modified housework.

1. Home exercise programme:

- cardio-vascular/aerobic activity (per week) – five early mornings for 30 minutes – walk three mornings – cycle two mornings (might be to the shops);
- daily half hour at home programme: stretches (daily); strength and tone (alternate days).

2. Other exercise:

- Pilates 2x/week – Alexander Technique (1/month).

3. Modifying everyday activities;

- housework activities and do no more than 3x/week;
- piano teaching activities.

4. Changes and challenges:

- new challenge: to find out about new career as an exercise instructor;
- wanted to get up earlier to walk, cycle (or eventually) go to the gym;
- wanted to have a strategy for coping with pain when it came each day;
- wanted to adapt the way that she did housework, daily chores and teaching piano.

5. Judy's pain management plan:

- take anti-inflammatory remedies/ pain killers;
- put hot water bottle on painful area (wrapped in thick towel);
- do 'release/relief' exercises (page 20);
- keep doing things like keeping the tummy in and thinking about movement;
- keep moving and don't stay in one position for too long;
- go to an Osteopath or Physiotherapist if the pain gets worse or lasts for too long.

So what did Judy achieve?

1. She got help.
2. She sorted out what she needed and wanted to do.
3. She got a plan together to make changes.
4. She began thinking and acting more positively.
5. She made many of the changes.
6. She had a sunnier life!

So.. what do you have to do?

Take things at your own pace – don't try and compete with others around you

Be realistic – it will take time and effort to change

Be positive

Stay active – remember our bodies are designed to move

Keep in shape

You will begin to feel better...Be able to be yourself...Be able to enjoy life!

Leaving a Legacy ...

*...planting a tree, knowing
others will enjoy its shade*



Supporting education and research in the
prevention and relief of back pain

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