

BACK PAIN – CHRONIC / PERSISTENT

If you've got back pain you are in good company because 4 out of 5 of us get back pain at some time. However, most bouts of back pain get better in a short time and simple pain killers are all that are needed. Getting back to normal activities is the best way to cope with back pain.

If pain persists for longer than 12 weeks it is termed persistent or ('chronic') back pain. The nerves of the *spinal cord*, which connect the brain to the rest of the body, run down a hollow channel in the spine (the spinal canal). Where the nerves pass out from the spinal column on their way to the muscles of the arms and legs they are known as nerve roots. The bones of the back are also held together by tough bands called *ligaments* which, together with the spinal muscles, give the back its strength.

What causes back pain?

Sprains and strains

Sprains of the back are a part of everyday life and the back is usually very good at taking these 'knocks'. Often you can't remember a sprain – an awkward movement may have caught your back 'off guard' and 'pulled' a muscle or sprained a ligament. Most cases of back pain are due to these sprains, which usually heal themselves within a short time. The body responds to this type of injury by trying to splint the painful area. This sets up muscle spasm or 'cramp' which may last several weeks and can be very painful. The affected muscle then tends to become weaker. It is therefore very important to exercise the affected muscle to reduce the spasm and try to improve its strength.

Back pain may be localised to the back but will sometimes be associated with pains in the legs – so-called 'referred pain' or *sciatica*. It is called sciatica because it affects the sciatic nerve which runs from the spine to the leg, and the pain, often accompanied by an abnormal feeling, is felt in the buttock, thigh and calf, and it can go all the way down to the big toe. Sciatica may be caused by muscle spasm following an injury, jolt or sprain to the spine. Normally this type of pain will last only for a short time and will ease with movement. However, sciatica may also be associated with a 'slipped' or 'prolapsed' disc. This is where the inner jelly of the disc bulges (or 'prolapses') through the outer fibrous ring. It can then press on a nerve and cause pain. When sciatica occurs as a result of a slipped disc then it is likely to be more persistent, lasting perhaps 6 weeks before it begins to settle down.

Spondylosis

More persistent back pain can sometimes occur in association with arthritis of the facet joints and degeneration of the discs (sometimes called *spondylosis* or degenerative spinal disc disease). As we grow older the discs in the spine become thinner and the spaces between the vertebrae become narrower. These changes may cause back pain, but often they do not. Some people, even those with badly worn discs and facet joints (which can be seen on x-rays), may experience no pain whatsoever.

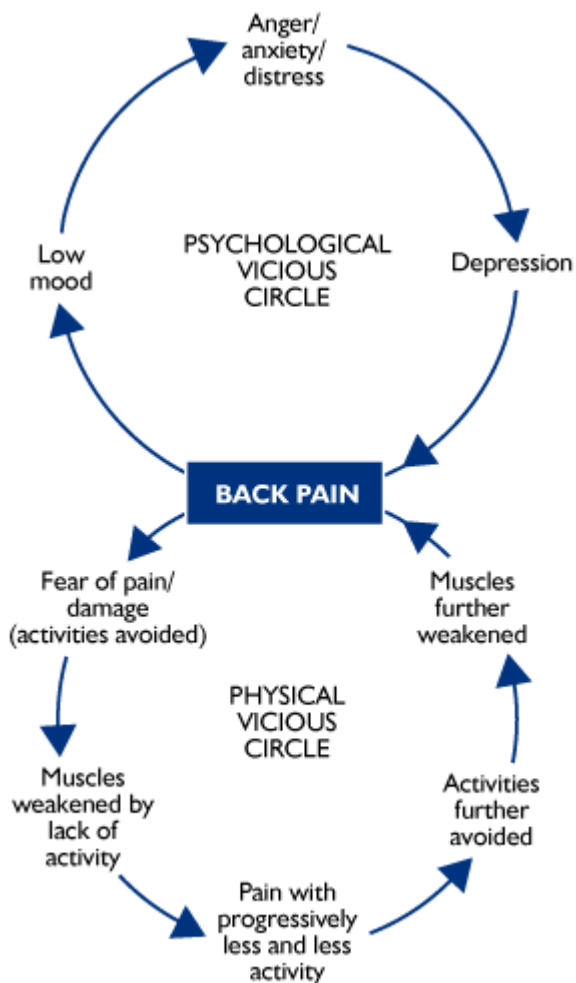
Should I have an x-ray or scan?

Generally speaking, if your back pain has come on recently then a plain x-ray of your back will not help to identify the cause of the pain. There are two main reasons for this. Firstly, most back pain comes from the soft tissues of the back (such as ligaments and muscles) and these cannot be seen on an x-ray. Secondly, as we get older we all have changes in the bones of the back which are due to normal ageing (spondylosis); these changes will be visible on an x-ray but, as suggested above, may not be causing the pain.

Why does back pain become persistent?

Often it is not known why someone has persistent back pain. Even if a cause can be found (such as a slipped disc or arthritis of a facet joint) the pain may continue, sometimes long after the original problem has settled down.

Pain may at first cause you to avoid normal activities and movement. If your initial spell of back pain lasts a long time, lack of activity can cause the back muscles to become weak, and this reduces the ability of the spine to take further knocks. You may also lose confidence in your ability to resume your normal activities. This may affect your work, your social life and your personal relationships. Naturally, you may feel depressed and anxious in this situation and this can lead to further loss of confidence, frustration and anger, particularly if family members and the medical profession appear unhelpful or unsympathetic. If you are anxious or depressed as a result of the pain you may not feel like exercising, so your muscles become weaker still, and so it goes on. Physical and psychological factors can therefore combine to create two interconnected vicious circles – see diagram below.



The 'vicious circles' of back pain.

Will I need an operation?

Only a few people with a back pain need surgery (probably less than 1% of all cases of back pain). It is usually better to let nature 'take its course' and, in most cases, the condition will improve without surgery.

What back exercises should I do?

Exercise is **the most important way** that you can help yourself. Any form of continuing pain will mean that you stop moving so well. This leads to your muscles wasting and this will make your back weaker and more easily tired. So you need to restore the strength and flexibility in your back. The body needs strong back muscles to work as a shock absorber for jolts and knocks which are part of daily life.

Your job is to:

- regain flexibility
- build up muscle strength and stamina
- improve your general fitness

You may be advised about specific exercises by a physiotherapist. Even when your back is sore you can make a start without putting too much stress on your back. Also, remember that your back may feel sore after the first few days of exercises – this is normal so don't let it put you off (it may help to take some painkillers before exercising on these days).

The exercises fall into three main groups:

- **Stretching exercises** These include exercises for the back and leg muscles (see figure 6).
- **Strength, stamina and stabilising exercises** These include exercises for the back, stomach and leg muscles (see figure 7).
- **Exercise for general fitness** This includes any exercise which makes you out of breath, but choose something you enjoy such as swimming, cycling or keep-fit classes.

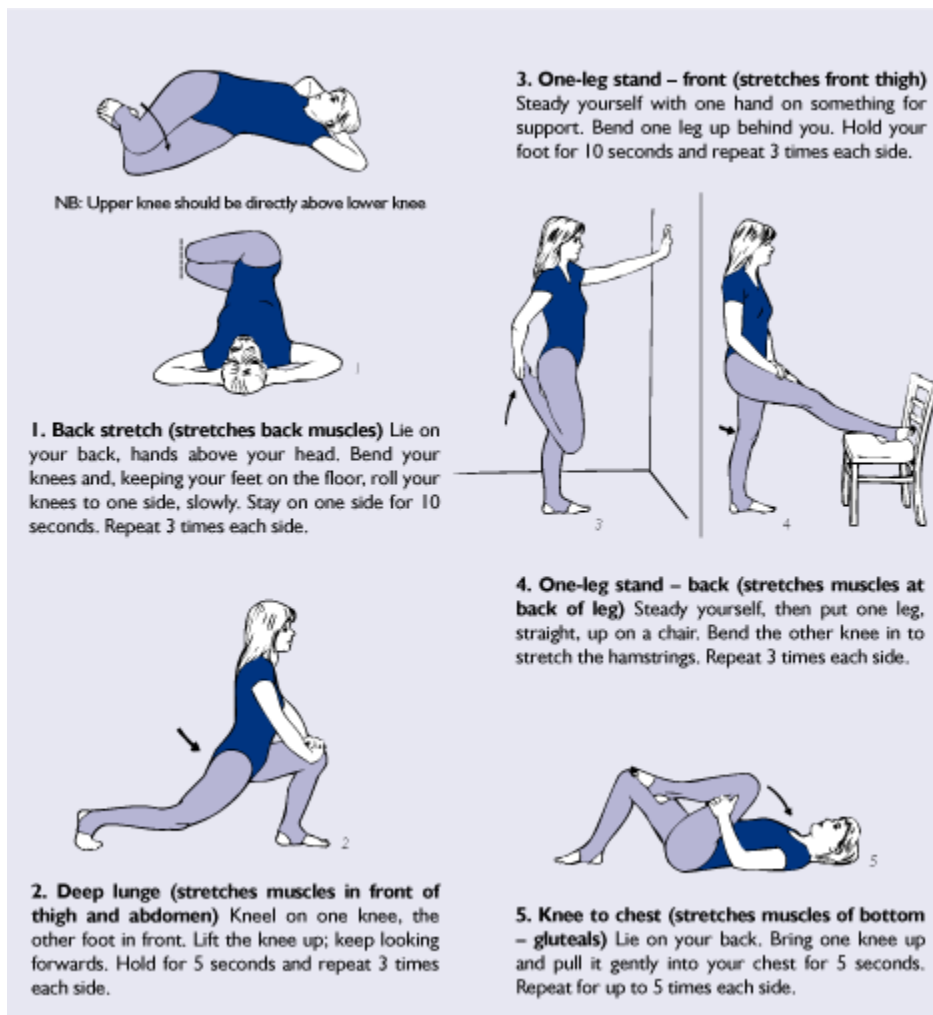


Figure 6. Stretching exercises.

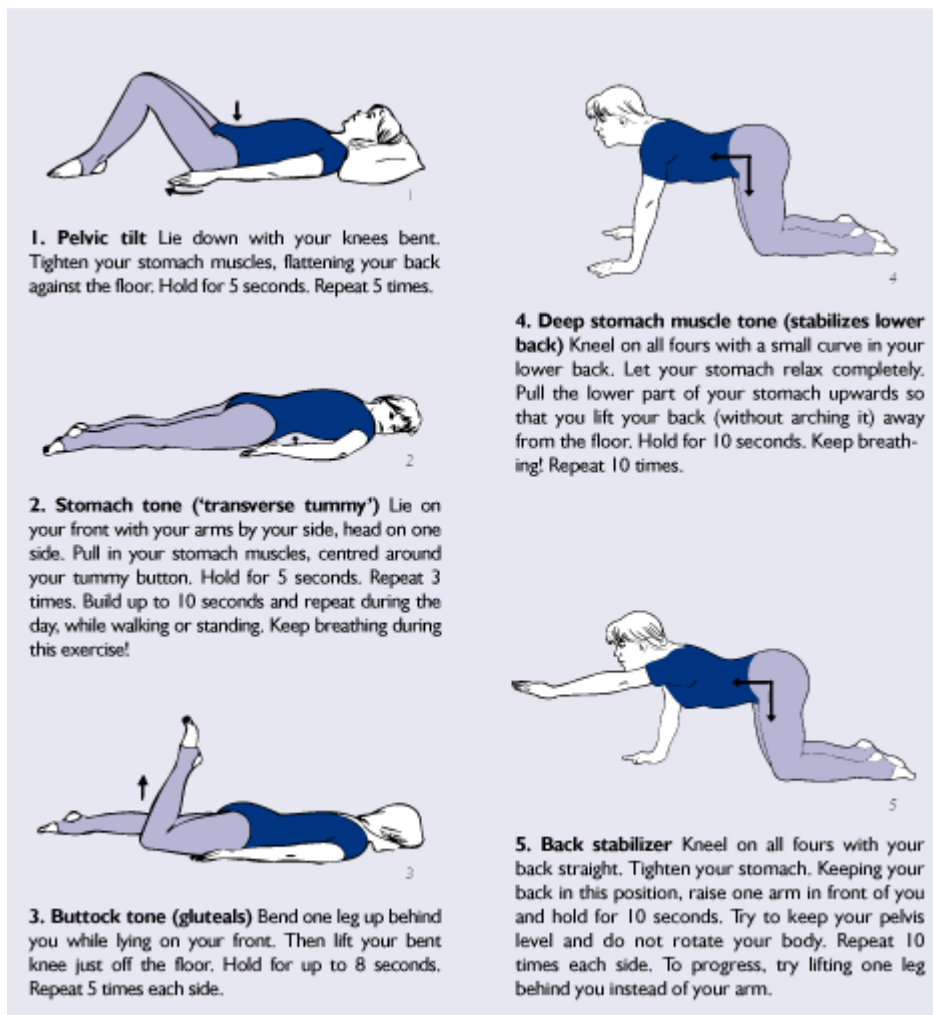


Figure 7. Strength, stamina and stabilizing exercises.

Any exercise is easier if you increase it gradually and if you do it along with someone else. Group exercise classes may run in your local sports centre. It is very important to exercise regularly. Just as it is advisable to clean your teeth twice a day to prevent damage and to keep your mouth healthy, so it is important to exercise your back daily. Research has not shown that any particular exercise is better than another, or that you need to exercise for a specific length of time, but the general principle is that the more effort you put into the exercise the better. Regular exercise not only keeps your back fit but also helps to strengthen bones, and will release endorphins which are the body's own painkillers. If you are overweight, exercise will also help you to lose weight, which will reduce the strain on your back.

If you have arthritis in other joints you can still do appropriate back exercises.

How active should I be?

Generally, the more active the better. Unless your pain is very severe or causing bad sciatica you should try to stay mobile. Do some specific back exercises every day and some general fitness exercise as well. Remember, specific exercises to keep your back supple and strong, and general exercises help you feel good about yourself and help release natural painkillers (endorphins).

What sort of things might make my back pain worse?

Everyone is different but there are a number of situations which are likely to make your back pain worse:

- **Sitting too long in one position**, especially in a poor position, e.g. slumped in a chair (see figure 8).
- **Driving** is often a situation you can't avoid, but make sure the seat is adjusted correctly for your height (use a cushion to sit on if necessary). You should also maintain your lumbar curve, which is the curve that forms the hollow in the lower part of your back, and take regular breaks when on a long journey (see figure 9).
- **Lifting heavy weights incorrectly**. Avoid lifting heavy objects if you can. If you must do it, always keep the weight close to your body and bend your knees. In practice if you find you are holding your breath as you lift or push something then it is too heavy.
- **Spending long periods bending over**, such as when gardening, cleaning/housework, shopping.
- **Worrying**. Try to avoid stress and too much worry – tension can often make your back pain worse. You may want to try relaxation classes. Talk to others and make a plan about things which worry you. **Not taking regular exercise** and doing your back routine!



Figure 8(a). Bad posture when seated at a desk.



Figure 8(b). Good posture when seated at a desk.

Adjust the chair or table, and position of the computer screen, so that you don't have to slump. Have your work in front of you, not to the side. Consider trying a tilted stool.



Figure 9(a). Bad posture when driving.



Figure 9(b). Good posture when driving.

Use cushions to experiment if you need a higher seat or support in the small of your back.

Do corsets help?

Corsets are still commonly prescribed by doctors, but they don't usually do the job they are meant to do (which is to restrict your movement and carry some of the weight of the upper body). People can become dependent on corsets. It is better to strengthen your back by doing exercises rather than relying on corsets.

Should I get a new bed?

Many people with back pain prefer a firm surface to lie and sleep on as they feel the back is better supported in this way. Many so-called orthopedic beds provide this level of firmness. However, you may be able to get the same effect just by putting a board under your mattress. Look around carefully and try things out before buying a new bed. Remember that the mattress should be soft enough to mould to the shape of your body at the shoulder, waist and hip, but firm enough to support your spine. A mattress that sags will allow the spine to bend and will tend to strain your back.

What aids and appliances are available?

If you have long-standing back pain you may need to change how you do things to avoid making the pain worse. For example, as mentioned earlier, gardening can make you bend over the long periods of time. You should make changes such as using long-handled gardening tools. You can also buy back supports to lean against (not corsets!) for use when sitting at home, at work or in the car. Most towns have a centre or shop where these aids can be tried and purchased, for example Disabled Living Centres. You could also ask for advice from an Occupational Therapist who will help you to change the way you do things and advise on equipment or supports.

Do any special diets help?

If you are overweight you should consider a weight-reducing diet because of the extra strain that your weight puts on your leg joints and back. Exercise will help you to lose weight. You will also be advised to stop smoking (as this may be an independent cause of back pain), so you should take extra care to prevent the weight gain that often follows.

Should I give up work?

The answer to this question depends on your back pain, your age and your job. During a spell of back pain, we recommend that you try to stay at work or get back to work as soon as possible. If your job involves heavy physical work you may need a period of lighter duties – talk to your foreman or boss. Statistics show that the longer you are off work the less likely it is that you will return.

Summary: What can I do to help myself?

- Remember, don't panic! Most spells of back pain will get better.
- Don't rest for too long after the start of the pain – 2-3 days at most. Too much rest is bad for you – your muscles become flabby, your bones become thin (lose density), and it becomes even harder to get going again.
- Gradually increase your normal activities, avoiding painful movements at first.
- Do your back exercises regularly and **without fail twice a day in the same way as you clean your teeth twice a day**. This is your chance to fight back. You won't notice a dramatic change but over time your back will become stronger and you'll feel more confident about it. You will be able to lift again within the safety limits recommended.
- Take up some additional form of exercise (what, more?! Yes, more! – we suggest you change your way of life). Keep-fit classes, exercise bikes and swimming and all good exercises.
- Stop smoking. It makes exercising difficult and it may make back pain worse.