Arthritis Research UK

Condition
**Back pain**

# Back pain

**This booklet provides information and answers to your questions about this condition.**

Arthritis Research UK produce and print our booklets entirely from charitable donations.

# What is back pain?

Back pain is very common and usually doesn't have a serious cause. In this booklet we'll explain a bit more about back pain and its causes, how it's diagnosed and treated, and the importance of self-help measures. We'll also suggest where you can get more information.

At the back of this booklet you'll find a brief glossary of medical words - we've underlined these when they're first used.

**www.arthritisresearchuk.org**

# What's inside?

# At a glance
# Back pain

**Back pain is common but isn't usually caused by a serious problem.**

## What is back pain?

Back pain is a common problem, which affects four out of five of us at some point. It's often caused by a simple muscle, tendon or ligament strain and not usually by a serious problem.

## What can I do to help myself?

There are several ways you can help yourself, including:

- taking painkillers
- exercising regularly
- checking your posture
- lifting things correctly
- finding out about complementary medicine and pain management programmes.

## When should I see my doctor?

You should see your doctor if your pain:

- is very severe or lasts for a long period of time
- significantly affects your everyday activities.

Very rarely, back pain can be a symptom of a more serious problem. See your doctor immediately if:

- you have difficulty controlling or passing urine
- you lose control of your bowels
- you have numbness around your back passage or your genitals
- you have weakness in your legs or are unsteady on your feet.

## What causes it?

In most cases the cause of back pain is unclear, but some back pain may be caused by a number of factors, including:

- poor posture
- lack of exercise resulting in stiffening of the spine
- muscle strains/sprains.

But there are some specific conditions linked with a painful back, including spondylosis, sciatica and spinal stenosis.

## What treatments are there?

Taking painkillers, staying active and doing some exercise are the most common things that help most people with back pain. If you need more treatment this may include:

- physiotherapy
- occupational therapy
- drug treatments such as amitriptyline, gabapentin and pregabalin
- injections
- surgery.

## What is back pain?

Back pain is a common problem, usually caused by a simple muscular strain, which affects four out of five of us at some point. Fortunately, most periods of back pain get better after a few weeks with simple treatment. As far as possible, it's best to continue with your normal everyday activities as soon as you can.

Sometimes, however, back pain can continue for longer than expected, or you may have other symptoms besides pain and stiffness. In this case it's best to seek medical advice to see if there's a more serious cause of your pain.

Many people develop back pain for no obvious reason. In fact, research suggests that it's impossible to find a specific cause of pain for around 85% of people in the early stages. This type of back pain is described as non-specific or mechanical back pain.

In most people the pain starts quickly but then reduces after a few days or weeks. (This is called acute back pain.) But for some people pain might last for several weeks or even months and years, and this is called chronic back pain. Most people with chronic back pain tend to have good and bad days.

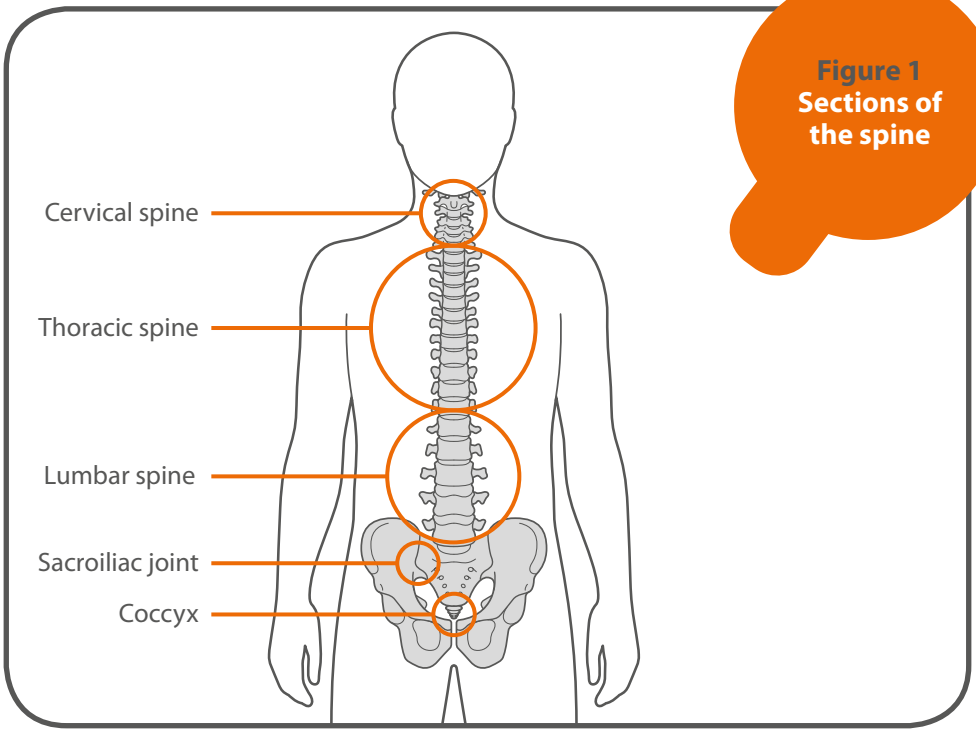



**Figure 1**
**Sections of the spine**

## How is the back structured?

The spine, also called the backbone or spinal column, is one of the strongest parts of the body and gives us a great deal of flexibility and strength (see Figure 1). It's made up of 24 bones (vertebrae), one sitting on top of the other with discs in between and lots of strong ligaments and muscles around them for support. On either side of the spine, running from top to bottom, are many small joints called the facet joints. The spinal cord passes inside the vertebrae, which protect it. The spinal cord connects to the brain through the base of the skull and to the rest of the body by nerves that pass through spaces between the bones of the spine. These nerves are also known as nerve roots (see Figure 2).

As you grow older, the structures of your spine, such as the joints, discs and ligaments, age as well. The structures remain strong but it's usual for your back to get stiffer as you get older.

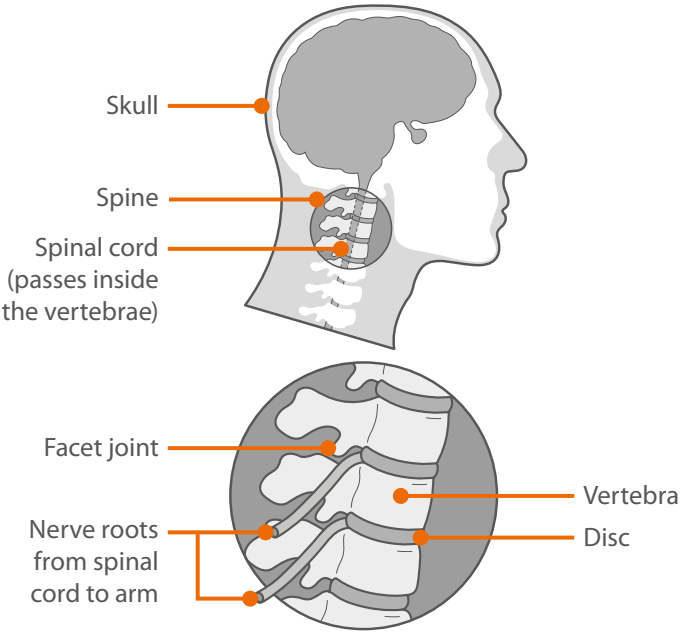



**Figure 2 Structure of the head and neck**

Cross-section of the head and neck with part of the spine shown magnified

**Wear and tear of the spine can cause pain as we age, but it isn't always a problem.**

## What causes back pain?

Often non-specific back pain doesn't have one simple cause but may be due to a range of factors, including:

- poor posture
- lack of exercise resulting in stiffening of the spine
- muscle strains or sprains.

As well as the factors listed above, there are also specific conditions which are linked with pain felt in the back. But it's important to remember that severe pain doesn't necessarily mean there's a serious problem. Some common conditions are listed below.

### Spondylosis

You may be told that your back pain is due to wear and tear of the spine. This is called spondylosis and is very similar to the changes caused by osteoarthritis in other joints. As we grow older the discs in the spine become thinner and the spaces between the vertebrae become narrower. Spurs of bone (osteophytes) may form at the edges of the vertebrae and facet joints. All of us have wear and tear as we get older but not all of us have pain. In most cases wear and tear is just part of the normal aging process and not really related to any problems with the spine.

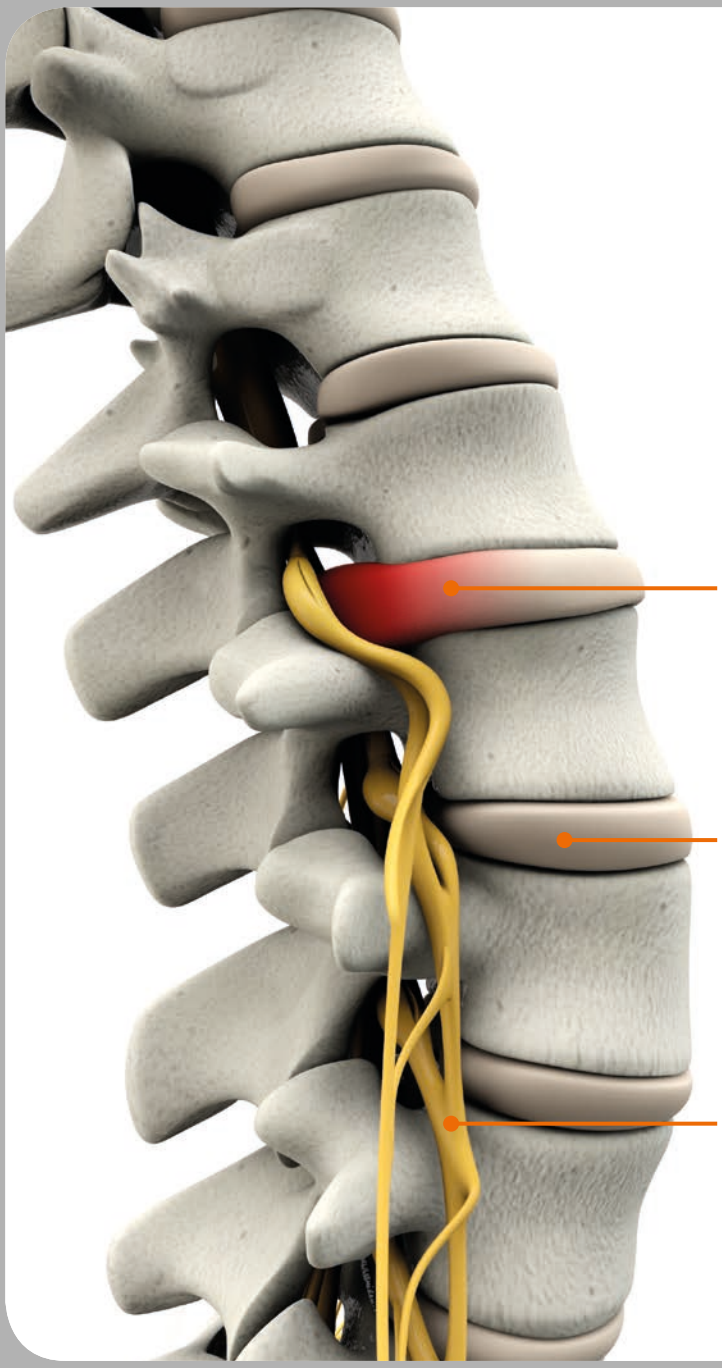
**See Arthritis Research UK booklet** *Osteoarthritis*

### Sciatica

Back pain is sometimes linked with pain in the legs, and there may be numbness or a tingling feeling. This is called sciatica. This is due to irritation or squeezing of the sciatic nerve roots in the spine. For most people who develop sciatica, the leg pain tends to be the most troublesome symptom and they may not have back pain at all. Pain travels down the leg because of the irritation of the sciatic nerve in the lumbar spine, but there's actually nothing wrong with the leg itself.

In most cases the reason for the nerve irritation is a bulging disc. Discs are designed to bulge so we can move our spines about easily, but sometimes a bulge can 'catch' the sciatic nerve roots and cause pain that travels all the way down the leg and foot (see Figure 3). Fortunately most people recover fairly quickly, although in some cases it might take a number of months. About 60% of all people with sciatica get better within a few weeks to months.

**Figure 3**
**Rupture or bulge of a vertebral disc**



### Spinal stenosis

Sometimes back pain is linked with pain in the legs which starts after a few minutes' walking and tends to get better very quickly when you sit down. This is known as spinal stenosis. This can happen from birth or develop as we get older and causes the spinal canal or nerve root canal to become squeezed by bone or ligament. Symptoms often affect both legs but one may be worse than the other. The pain usually eases when you sit down and rest, and some people have less discomfort if they walk a little stooped. Like sciatica, the main problem tends to be leg pain more than the back pain.

In most cases, neither sciatica nor spinal stenosis are causes for alarm, but if the symptoms cause you a lot of trouble and greatly affect your quality of life then you should see your doctor for further advice and to discuss what else can be done.

### Other rarer causes of back pain include:

- bone problems such as a fracture – often linked to thinning of the bones (osteoporosis)
- an infection
- a tumour
- inflammation, such as in ankylosing spondylitis.

**See Arthritis Research UK booklets** *Ankylosing spondylitis; Osteoporosis.*

## Should I see a doctor?

Unless your back pain is very severe and lasts for a very long period of time, or stops you doing your everyday activities, you probably won't need to see your doctor. Only about 10% of all people who have back pain go to see their doctor, despite the fact that most people are likely to have more than one episode of back pain.

### What are the warning signs of a serious problem?

Very rarely (less than 1% of cases) back pain or back pain that travels down the leg is a sign of a serious problem. You should see your doctor urgently if you experience any of the following symptoms:

- difficulty controlling or passing urine
- loss of control of your bowels
- numbness around your back passage or your genitals
- weakness in your legs or being unsteady on your feet
- very severe and ongoing back pain that gets worse over several weeks.

## What can I do to help myself?

### Painkillers

Simple painkillers such as paracetamol (an analgesic) may help. You should use them as and when you need them but it's best to take them before the

pain becomes very bad. It's important that you take them regularly and at the recommended dose, especially when you're having a flare-up of your back pain but you shouldn't take them more often than every four hours up to a maximum of eight tablets in 24 hours. Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, which you can buy at chemists and supermarkets, can also help.

You can use painkillers and NSAIDs for a short course of treatment of about a week to 10 days. If they've not helped after this time then they're unlikely to. However, if they do help but the pain returns when you stop taking them you could try another short course. You can also try rubbing anti-inflammatory creams or gels onto affected areas.

You shouldn't take ibuprofen or aspirin if you're pregnant, if you smoke, or if you have asthma, indigestion or an ulcer until you've spoken with your doctor or pharmacist. If you have circulation problems, high blood pressure, high cholesterol or diabetes, you should check with your doctor or pharmacist whether you should use over-the-counter NSAIDs because they may interact with any medication you're taking. If you have stomach problems after using over-the-counter medication, you should stop taking the tablets and see your doctor.

If these medications don't help, your GP may be able to prescribe other painkillers. If they prescribe stronger NSAIDs, they'll take precautions to reduce the risk of side-effects – for example, by prescribing the lowest effective dose for the shortest possible period of time. NSAIDs can cause digestive problems (stomach upsets, indigestion or damage to the lining of the stomach) so in most cases NSAIDs will be prescribed along with a drug called a proton pump inhibitor (PPI), which will help to protect the stomach.

NSAIDs also carry an increased risk of heart attack or stroke. Although the increased risk is small, your doctor will be cautious about prescribing NSAIDs if there are other factors that may increase your overall risk, for example, high blood pressure, smoking or diabetes.

Sometimes other drugs are used to treat back pain if you're really struggling with your symptoms. See 'What treatments are there for back pain?' for more information.

**See Arthritis Research UK drug leaflets** *Drugs and arthritis; Non-steroidal anti-inflammatory drugs (NSAIDs); Painkillers (analgesics).*

## Exercise

Physical activity is good for everybody and too much rest can lead to stiffness in your muscles and joints. Our bodies are built for movement and you need regular physical activity to remain fit and healthy. Research shows that bed rest for more than a couple of days doesn't help back pain and in the long term actually makes it worse.

Exercise is the most important way that you can help yourself if you have back pain. If you stop being active for a long time, the muscles in your back become

weak and you become less fit, and this can make your back pain worse. Research shows that regular exercise leads to shorter and less frequent episodes of back pain. Exercise also releases endorphins (your body's natural painkillers) which improve pain and make you feel happier.

Exercise might make your back feel a bit sore at first but it doesn't cause any harm – so don't let it put you off! Start off slowly and gradually increase the amount of exercise you do. Try taking some painkillers beforehand too. Over time, your back will get stronger and more flexible and this should reduce pain.

It's better to choose a form of exercise that you enjoy as you're more likely to stick to it. Any regular exercise that helps to make you flexible and stronger and increases your stamina is good, for example:

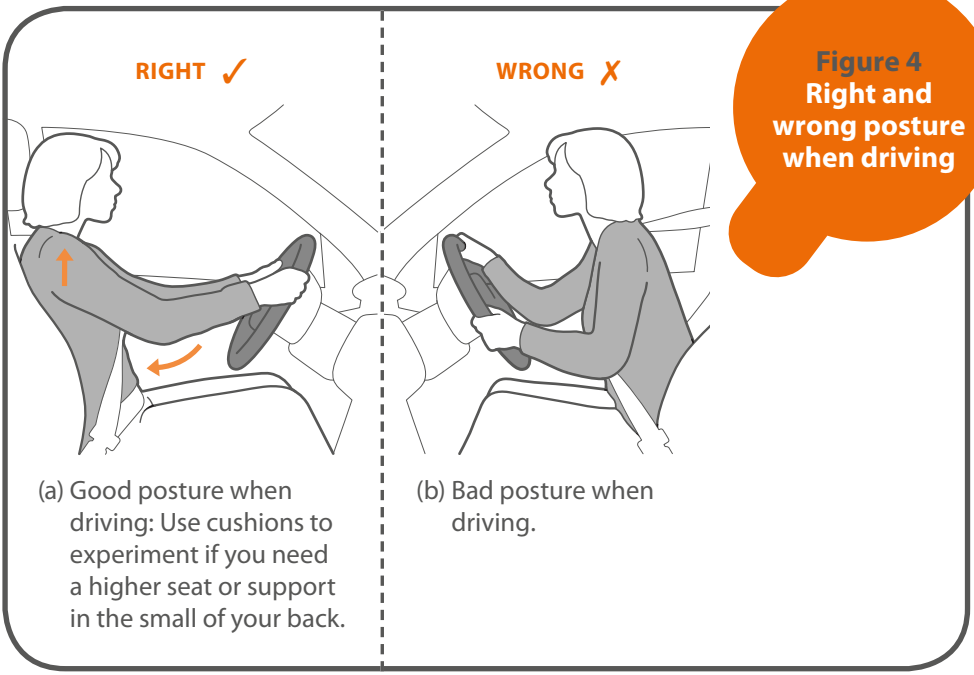
- swimming
- walking
- yoga or Pilates
- going to the gym.

A recent Arthritis Research UK-funded study found that a specially developed 12-week yoga programme can help people with low back pain lead more active

lives and manage their condition more effectively. Many of the people who took part in the study also found that they had the knowledge to prevent further attacks if they felt an episode of back pain coming on. You can find more information about the 12-week programme at **www.yogaforbacks.co.uk**. Many community and sports centres also run yoga classes if you're interested in trying it. Make sure you speak to the teacher before you start so they're aware that you have back pain.

The exercises provided in the pull out section at the back of this booklet are designed to stretch, strengthen and stabilise the structures that support your back. They may not be suitable for all types of back pain, so it's a good idea to get advice from your doctor or physiotherapist about specific exercises before you begin. As with any physical activity it's normal to feel some aches in your muscles, especially if you've just started doing more exercise, but you should stop if you get any joint pain that doesn't go away quickly.

Often people stop exercising once their back pain has cleared up. But if you stop exercising all the improvements you've made will disappear within a few weeks. So, it's important that you continue to exercise regularly and don't stop when the pain is gone and you're feeling better.




(a) Good posture when driving: Use cushions to experiment if you need a higher seat or support in the small of your back.

(b) Bad posture when driving.

**Figure 4 Right and wrong posture when driving**

## Posture

Try to maintain good posture when sitting at home, at work or in the car (see Figures 4 and 5). Staying in awkward positions while working or driving, for example, will affect the soft tissues in your back's support structures and will increase your pain or your recovery time.

## Complementary medicine

There are many different complementary and herbal remedies that are believed to help with pain relief, and some people do feel better when they use a complementary medicine. However, on the whole these treatments aren't recommended for use on the NHS because there's no proof that they definitely work.

Sometimes acupuncture might provide pain relief. It's thought to work by diverting or changing the painful sensations that are sent to the brain from damaged tissues and by stimulating the body's own pain-relieving hormones (endorphins and encephalins).

Massage is a manual technique which uses rhythmic strokes, kneading or tapping actions to move the muscles and soft tissue of the body. Massage can reduce anxiety and stress levels, ease muscular tension and fatigue and improve circulation, which all work to reduce pain levels.

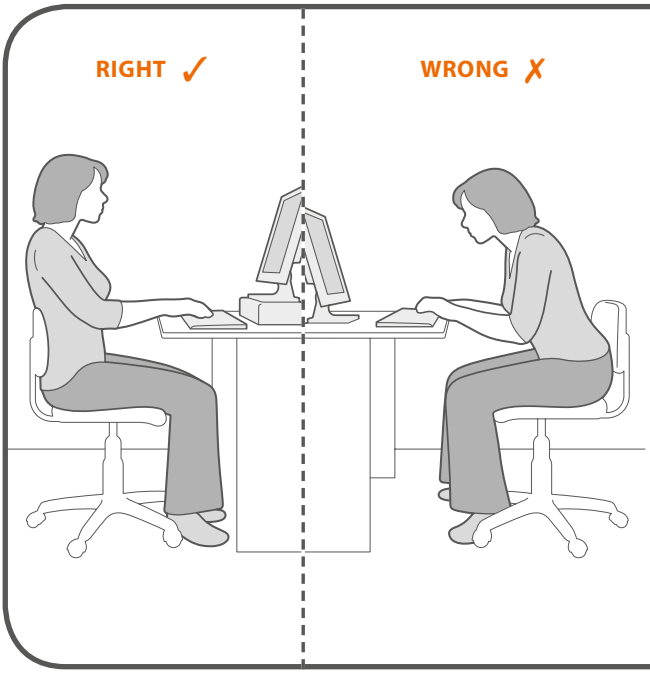



**Figure 5**
**Right and wrong posture when seated at a desk**

(a) 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.

(b) Bad posture when seated at a desk

**See Arthritis Research UK booklets and report** *Complementary and alternative medicine for arthritis; Physiotherapy and arthritis.*

## Lifting correctly

Learning to lift correctly is important to help prevent further episodes of back pain. Avoid heavy lifting if you can. Planning and pacing are important – think about what you need to do and see if you can do it in stages. Bend your knees when lifting and allow your spine to move as necessary, without twisting it. When doing tasks like carrying shopping, try and split the load between both hands. Keeping the weight close to your body also helps.

**See Arthritis Research UK booklet** *Looking after your joints when you have arthritis.*

## Diet and nutrition

There are no special diets that have been shown either to help or prevent back pain. However, if you're overweight you should consider changing your diet and doing some regular exercise to help you lose weight as this will reduce the strain on your back.

**See Arthritis Research UK booklet** *Diet and arthritis.*

## Heat/ice packs

Applying a heat pack to the affected area can ease pain and stiffness. You can use a reusable heat pad (which you can buy from chemists and sports shops), a microwaveable wheat bag or a hot-water bottle. An ice pack (for example, a pack

of frozen peas) can also be helpful. Make sure you protect your skin from direct contact with heat or ice packs to avoid burns or irritation of the skin.

### Pain management programmes

Pain management programmes may help you control your pain and teach you how to live with chronic pain. They're usually outpatient sessions and involve learning about the physical and psychological factors that can contribute to pain and what you can do to overcome them.

**See Arthritis Research UK booklet and guide** *Pain and arthritis; Living with long-term pain: a self-help guide.*

## What is the outlook?

It's hard to say how long your symptoms will last because diagnosing the cause of back pain is difficult. For most people the outlook is good, with 75–90% of people recovering within a few weeks. However, the pain does tend to come back (recur) every now and then, similar to the way headaches or colds can recur.

There are several things which can be linked to ongoing back problems. The main factor is the severity of pain and its impact on sleep and everyday activities. Getting the right pain relief to allow you to return to your usual activities is the key to success in the early stages.

Among people who seek medical help for their back pain, around two-thirds have some pain a year later, although over 90% are able to work. If the back problem has been present for a long time then the symptoms are more likely to keep coming back, and only a third of people make a full recovery a year later. However, despite symptoms, most people manage to lead a normal life and stay at work with the right pain relief and exercise.

There's also evidence to suggest that how you respond emotionally to having back pain has an important impact on how quickly you get better. Because of this, your doctor will usually ask about:

- how you feel about your back pain
- your mood
- your sleeping patterns.

This will help them to predict how long your problem may last and guide your treatment. Many of these things develop gradually or are due to reasons outside of your control. Sometimes unhelpful beliefs are encouraged by well-meaning friends or relatives; for example, they could make you concerned that the problem is more serious than it is and that doing things which hurt mean you're damaging your back.

It's natural to be concerned about the cause of your back pain, but it's important to talk openly about any worries with a healthcare professional, as reducing any fear may help speed up your recovery.

**Bed rest for more than a couple of days is bad for you and makes it harder to get going again. Try to keep active.**

**Gradually increase your level of activity and do some regular exercise.**

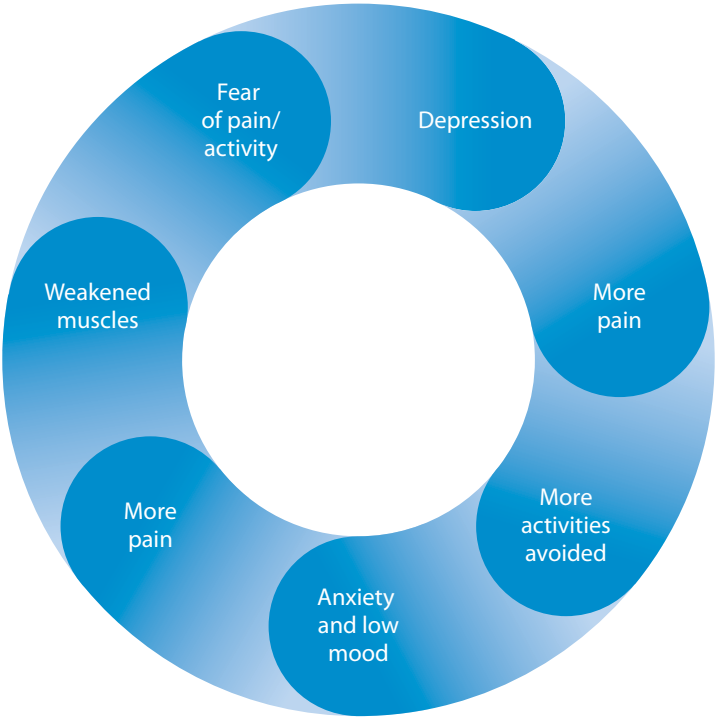
## Why does back pain become chronic?

Often we don't know why someone has chronic back pain. Even if a cause can be found (such as a worn facet joint or disc) the pain may continue after the original problem has settled down.

When you're in pain for a long time your first thought may be to avoid normal activities and movement. But we know that lack of activity can cause the back muscles to become weak. This will mean that your muscles will tire more easily and will be more vulnerable to further strain. This is known as deconditioning.

You may also lose confidence in your ability to resume your everyday activities. This may affect your work, social life and personal relationships. You may feel worried or depressed, particularly if family members and medical professionals appear unhelpful or unsympathetic. If you're anxious or depressed you may not feel like exercising, so your muscles become weaker still, and so it goes on. This creates a pain cycle, as seen in Figure 6.

**Figure 6** **The pain cycle**



This can happen to anyone, and the longer it goes on the harder it'll be for you to recover your movement and confidence. So it's really important to keep up with exercise and daily activities as much as possible.

## How are back problems diagnosed?

National guidelines suggest that doctors should use a common-sense 'wait and see' approach when diagnosing back pain before deciding if you need further treatment, especially as most cases of back pain improve by themselves. As a patient this approach can sometimes be frustrating, but you may find that if you keep up your self-help measures you won't need further treatment anyway.

Should you need further treatment, your GP will be able to assess your back pain by discussing your symptoms with you. Most problems can be diagnosed after a simple examination, and it's unlikely that any special tests will be needed.

### What tests are there?

You may be sent for tests if you've had an injury to your back, if your doctor suspects that there may be an underlying cause for your pain, or if the pain has lasted for an unusually long time. In this case a magnetic resonance imaging (MRI) scan or computerised tomography (CT) scan may be needed.

Rarely, you may be asked to have an x-ray. However, these aren't often helpful for two reasons:

1. Most back pain involves the soft tissues of the back (such as the muscles or ligaments) and these can't be seen on an x-ray.
2. Some wear-and-tear changes in the bones and joints of the back are common as we age, and although these changes can be seen on an x-ray, they're not often related to back pain. Lots of people who don't have back pain still show these changes on x-ray.

**Take simple painkillers if needed so you can stay active.**

## What treatments are there for back pain?

Taking some painkillers, staying active and doing some specific exercises are generally the most helpful treatments for people with back pain. However, some cases will need further medical treatment.

### Physical therapies

Physiotherapy can be useful to improve your strength and flexibility. As mentioned previously, exercise is one of the most effective treatments for back pain. A physiotherapist can help oversee your exercise programme and recommend specific exercises to help.

Manual therapies ('hands on' treatments), such as manipulation and mobilisation of the spinal joints, can help to clear up a spell of back pain along with exercises. These manual therapy techniques are usually carried out by osteopaths, chiropractors and physiotherapists.

If your back pain is causing problems with daily activities such as dressing, washing and driving, you may find it useful to see an occupational therapist. They may suggest different ways of doing things to reduce the strain or recommend aids or gadgets that will help you. However, it's important that you don't come to rely on aids or gadgets instead of trying to get back to your daily activities.

**See Arthritis Research UK booklets**
*Physiotherapy and arthritis;*
*Occupational therapy and arthritis.*

## Drugs

If standard painkillers or NSAIDs aren't providing adequate pain relief, your doctor may suggest some additional treatments.

### Amitriptyline

Amitriptyline acts to relax muscles and improve sleep. You'll usually be prescribed the lowest possible dose to control your symptoms. If the starting dose isn't working, your dose can be gradually increased. This approach will help to lower the risk of side-effects, which can include a dry mouth, drowsiness and blurred vision. If you experience these side-effects you should stop the medication and discuss this with your doctor.

**See Arthritis Research UK drug leaflet** *Amitriptyline.*

### Gabapentin/Pregabalin

Gabapentin and pregabalin aren't usually given as a first-line treatment for 'ordinary' back pain. Although they don't help back pain, they may help sciatica by reducing irritation of the nerves. They may need to be taken for six weeks to begin with, and sometimes longer. As with all drugs there can be side-effects, so they won't be suitable for everyone. You should discuss this with your doctor.

## Steroid injections

Sometimes injections are useful for back pain or sciatica which is more severe or if the usual treatments like physiotherapy and painkillers aren't working well enough. The injections are usually of a steroid (a strong anti-inflammatory medicine) and may be placed around the nerve roots or into the facet joints.

## Surgery

Very few people with back pain (less than 2%) need an operation. Sometimes an operation is needed for spinal stenosis or for severe sciatica to free the nerve, although most doctors would recommend trying other measures first, including medication, physiotherapy or injections.

Urgent surgery may be needed if you lose bladder or bowel control or the use of your legs, but this is extremely rare.

# What if my back pain is affecting my work?

Try to stay at work, or get back to work as soon as possible, despite the pain. Most people are able to return within a few days, although the length of time off work varies with the individual and the type of job. It's important to keep in contact with your employer and discuss what can be done to help you return to work.

Returning to heavy, manual jobs will obviously take longer, and you may have to change to lighter duties for a time. Overall, research shows that getting back to work sooner rather than later is helpful for most people, although you may need to make some short-term changes, such as working different hours or doing lighter duties. You don't need to wait until

your back problem has gone. In many cases, the longer you're off work the more likely you are to develop longer-term problems and the less likely you are to return to work.

If you need further support to remain in your job, an occupational health advisor may help, either with work assessment or retraining. Sometimes simple changes to your workplace may be all you need. You can get further advice through a Disability Employment Advisor or through your local Jobcentre Plus.

**See Arthritis Research UK booklet** *Work and arthritis*.

## Research and new developments

Research carried out by the Arthritis Research UK Primary Care Centre at Keele University has demonstrated that a new model of primary care management called stratified primary care management can be really helpful for people seeking help from their GP for back pain.

The new approach involves referring patients for different levels of treatment, including physiotherapy, depending on their level of risk (low, medium or high) for ongoing back problems. Early results showed great health benefits for people who received treatment and reduced healthcare costs because fewer people needed to return for further treatment. Further research using this approach is now underway to confirm these positive findings.

# Glossary

**Acupuncture** – a method of obtaining pain relief that originated in China. Very fine needles are inserted, virtually painlessly, at a number of sites (called meridians) but not necessarily at the painful area.

**Analgesics** – painkillers. As well as dulling pain they lower raised body temperature, and most of them reduce inflammation.

**Ankylosing spondylitis** – an inflammatory arthritis affecting mainly the joints in the back, which can lead to stiffening of the spine. It can be linked with inflammation in tendons and ligaments. The spinal ligaments may harden (calcify), forming new bone which may eventually cause the vertebrae to join (fuse) together.

**Chiropractor** – a specialist who treats mechanical disorders of the musculoskeletal system, often through spine manipulation or adjustment. The General Chiropractic Council regulates the practice of chiropractic in the UK.

**Computerised tomography (CT) scan** – a type of scan that records images of sections or 'slices' of the body using x-rays. These images are then transformed by a computer into cross-sectional pictures. CT scans are helpful when looking at bony structures in the body.

**Disc** (intervertebral disc) – a circle of tough, fibrous cartilage with a jelly-like centre found between the bones of the spine. These discs give the spine its flexibility. A 'slipped disc' occurs when the central jelly (*nucleus pulposus*) of the disc bulges (*prolapses*) through the outer fibrous ring (*annulus fibrosis*). It can then press on a nerve and cause pain.

**Facet joints** – the small joints between the vertebrae that allow the spinal column to move. The facet joints are at the back of the spine.

**Inflammation** – a normal reaction to injury or infection of living tissues. The flow of blood increases, resulting in heat and redness in the affected tissues, and fluid and cells leak into the tissue, causing swelling.

**Ligaments** – tough, fibrous bands anchoring the bones on either side of a joint and holding the joint together. In the spine they're attached to the vertebrae and restrict spinal movements, therefore giving stability to the back.

**Magnetic resonance imaging (MRI) scan** – a type of scan that uses high-frequency radio waves in a strong magnetic field to build up pictures of the inside of the body. It works by detecting water molecules in the body's tissue that give out a characteristic signal in the magnetic field. An MRI scan can show up soft-tissue structures as well as bones.

**Manipulation** – a type of manual therapy used to adjust parts of the body, joints and muscles to treat stiffness and deformity. It's commonly used in physiotherapy, chiropractic, osteopathy and orthopaedics. A small, high-velocity thrust is given at the end of the available range of a joint's movement and outside the patient's control.

**Non-steroidal anti-inflammatory drugs (NSAIDs)** – a large family of drugs prescribed for different kinds of arthritis that reduce inflammation and control pain, swelling and stiffness. Common examples include ibuprofen, naproxen and diclofenac.

**Occupational therapist** – a trained therapist who can advise on strategies to help people maintain their independence. This may include practical advice on equipment, adaptations or changing the way you do things.

**Osteoarthritis** – the most common form of arthritis (mainly affecting the joints in the fingers, knees, hips) causing cartilage thinning and bony overgrowths (osteophytes) and resulting in pain, swelling and stiffness.

**Osteopath** – a specialist who treats spinal and other joint problems by manipulating the muscles and joints in order to reduce tension and stiffness, and so help the spine to move more freely. The General Osteopathic Council regulates the practice of osteopathy in the UK.

**Osteophyte** – an overgrowth of new bone around the edges of the vertebrae. Spurs of new bone can alter the shape of the joint and may press on nearby nerves. On an x-ray this is called spondylosis.

**Osteoporosis** – a condition where bones become less dense and more fragile, which means they break or fracture more easily.

**Physiotherapist** – a trained specialist who helps to keep your joints and muscles moving, helps ease pain and keeps you mobile.

**Spinal cord** – a cord that runs through and is protected by the spinal canal, and which contains the nerves that connect the brain to all the other parts of the body. The nerve fibres are surrounded by several protective layers and pass through the vertebrae (the bones of the back). The spinal cord and the brain together form the central nervous system.

**Tendon** – a strong, fibrous band or cord that anchors muscle to bone.

**Vertebra** (plural **vertebrae**) – one of the bones that make up the spinal column.

## Where can I find out more?

If you've found this information useful you might be interested in these other titles from our range:

### Conditions

- *Ankylosing spondylitis*
- *Osteoarthritis*
- *Osteoporosis*

### Therapies

- *Occupational therapy and arthritis*
- *Physiotherapy and arthritis*
- *Meet the rheumatology team*

### Self-help and daily living

- *Complementary and alternative medicine for arthritis*
- *Diet and arthritis*

- *Living with long-term pain: a self-management guide*
- *Osteoarthritis*
- *Osteoporosis*
- *Looking after your joints when you have arthritis*
- *Pain and arthritis*
- *Practitioner-based complementary and alternative therapies for the treatment of rheumatoid arthritis, osteoarthritis, fibromyalgia and low back pain (60-page special report)*
- *Work and arthritis*

### Drug leaflets

- *Amitriptyline*
- *Drugs and arthritis*
- *Non-steroidal anti-inflammatory drugs (NSAIDs)*
- *Painkillers (analgesics)*

You can download all of our booklets and leaflets from our website or order them by contacting:

**Arthritis Research UK**
Copeman House
St Mary's Court
St Mary's Gate
Chesterfield
Derbyshire S41 7TD
Phone: 0300 790 0400
www.arthritisresearchuk.org

## Related organisations

The following organisations may be able to provide additional advice and information:

**Arthritis Care**
Floor 4, Linen Court
10 East Road
London N1 6AD
Phone: 020 7380 6500
Helpline: 0808 800 4050
Email: info@arthritiscare.org.uk
www.arthritiscare.org.uk

**BackCare**
16 Elmtree Road
Teddington TW11 8ST
Phone: 0208 977 5474
Helpline: 0845 130 2704
www.backcare.org.uk

**British Chiropractic Association**
59 Castle Street
Reading
Berkshire RG1 7SN
Phone: 0118 950 5950
Email: enquiries@chiropractic-uk.co.uk
www.chiropractic-uk.co.uk

**British Pain Society**
Third Floor, Churchill House
35 Red Lion Square
London WC1R 4SG
Phone: 020 7269 7840
Email: info@britishpainsociety.org
www.britishpainsociety.org

**British Wheel of Yoga**
25 Jermyn Street
Sleaford
Lincolnshire NG34 7RU
Phone: 01529 306851
Email: office@bwy.org.uk

**Chartered Society of Physiotherapy (CSP)**
14 Bedford Row
London WC1R 4ED
Phone: 020 7306 6666
www.csp.org.uk

**Expert Patients Programme**
Phone: 0800 988 5550
www.expertpatients.co.uk

**General Chiropractic Council**
44 Wicklow Street
London WC1X 9HL
Phone: 020 7713 5155
Email: enquiries@gcc-uk.org
www.gcc-uk.org

**General Osteopathic Council**
176 Tower Bridge Road
London SE1 3LU
Phone: 020 7357 6655
Email: contactus@osteopathy.org.uk
www.osteopathy.org.uk

**Pain Relief Foundation**
Clinical Sciences Centre
University Hospital Aintree
Lower Lane
Liverpool L9 7AL
Phone: 0151 529 5820
Email: secretary@painrelieffoundation.org.uk
www.painrelieffoundation.org.uk

**Yoga for Healthy Lower Backs**
www.yogaforbacks.co.uk

Links to third-party sites and resources are provided for your general information only. We have no control over the contents of those sites or resources and we give no warranty about their accuracy or suitability. You should always consult with your GP or other medical professional.

**Please note:** We've made every effort to make sure that this content is correct at time of publication. If you would like further information, or if you have any concerns about your treatment, you should discuss this with your doctor, rheumatology nurse or pharmacist.

# Notes

# We're here to help

Arthritis Research UK is the charity leading the fight against arthritis.

We're the UK's fourth largest medical research charity and fund scientific and medical research into all types of arthritis and musculoskeletal conditions.

We're working to take the pain away for sufferers with all forms of arthritis and helping people to remain active. We'll do this by funding high-quality research, providing information and campaigning.

Everything we do is underpinned by research.

We publish over 60 information booklets which help people affected by arthritis to understand more about the condition, its treatment, therapies and how to help themselves.

We also produce a range of separate leaflets on many of the drugs used for arthritis and related conditions. We recommend that you read the relevant leaflet for more detailed information about your medication.

Please also let us know if you'd like to receive our quarterly magazine, *Arthritis Today*, which keeps you up to date with current research and education news, highlighting key projects that we're funding and giving insight into the latest treatment and self-help available.

We often feature case studies and have regular columns for questions and answers, as well as readers' hints and tips for managing arthritis.

## Tell us what you think

Please send your views to:
**feedback@arthritisresearchuk.org**
or write to us at:
Arthritis Research UK, Copeman House, St Mary's Court, St Mary's Gate, Chesterfield, Derbyshire S41 7TD

A team of people contributed to this booklet. The original text was written by Dr Sam Hider, who has expertise in the subject. It was assessed at draft stage by FRP team leader/ clinical assistant spines Caroline Evans. An **Arthritis Research UK** editor revised the text to make it easy to read, and a non-medical panel, including interested societies, checked it for understanding. An **Arthritis Research UK** medical advisor, Dr Jonathan Hill, is responsible for the content overall.

Arthritis Research UK

# Get involved

**You can help to take the pain away from millions of people in the UK by:**

- volunteering
- supporting our campaigns
- taking part in a fundraising event
- making a donation
- asking your company to support us
- buying products from our online and high-street shops.

To get more **actively involved,** please call us on **0300 790 0400**, email us at **enquiries@arthritisresearchuk.org** or go to **www.arthritisresearchuk.org**

Arthritis Research UK

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Tel **0300 790 0400**
calls charged at standard rate

**www.arthritisresearchuk.org**


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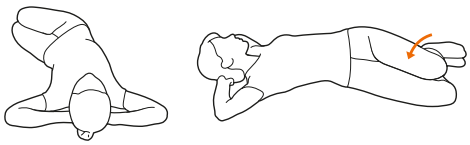
# Exercises for back pain

**This handy tear-off section contains exercises that are designed to stretch, strengthen and stabilise the structures that support your back.**

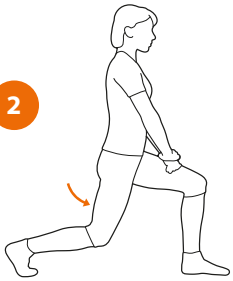
# Stretching exercises

1



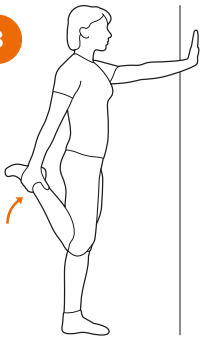
**Back stretch (stretches back muscles)** Lie on your back, hands above your head. Bend your knees and, keepingyour feet on the floor, roll your knees to one side, slowly. Stay on one side for 10 seconds. Repeat three times each side. Note: Upper knee should be directly above lower knee.

2



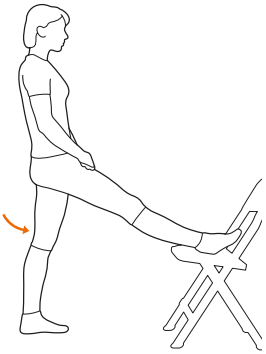
**Deep lunge (stretches muscles in front of thigh and abdomen)** Kneel on one knee, the other foot in front. Lift your back knee up making sure you keep looking forwards. Hold for five seconds and repeat three times each side.

3



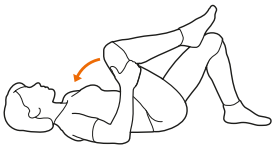
**One-leg stand – front (stretches front thigh)** Steady yourself with one hand on a wall or work surface for support. Bend one leg up behind you. Hold your foot for 10 seconds and repeat three times each side.

4



**One-leg stand – back (stretches hamstrings)** Steady yourself, then put one leg up on a chair. Keeping your raised leg straight, bend the supporting knee forward to stretch your hamstrings. Repeat three times each side. Please note: For those with acute sciatica this hamstring stretch may also pull on the sciatic nerve, making it feel worse. If in doubt, ask a physiotherapist if this exercise is suitable for you.

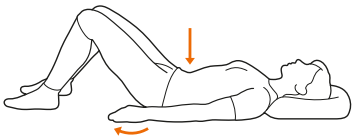
5



**Knee to chest (stretches muscles of bottom – gluteals)** Lie on your back. Bring one knee up and pull it gently into your chest for five seconds. Repeat for up to five times each side.

# Strength and stabilising exercises

1

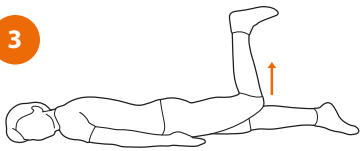


**Pelvic tilt (works the deep muscles around the pelvis)** Lie down with your knees bent. Tighten your stomach muscles, flattening your back against the floor. Hold for five seconds. Repeat five times.

2

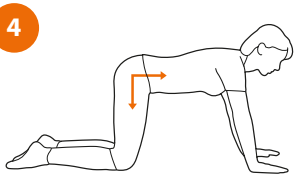
**Stomach tone (works the transverse tummy muscles)** Lie on your front with your arms by your side, head on one side. Pull in your stomach muscles, centred around your belly button. Hold for five seconds. Repeat three times. Build up to 10 seconds and repeat during the day, while walking or standing. Keep breathing during this exercise!

3



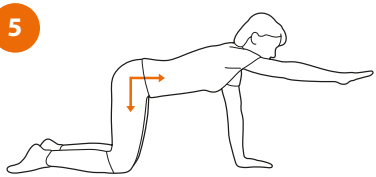
**Buttock tone (works the gluteals)** Lie on your front and bend one leg up behind you. Lift your bent knee just off the floor. Hold for up to eight seconds. Repeat five times each side.

4



**Deep stomach muscle tone (stabilises lower back)** Kneel on all fours with a small curve in your lower back. Let your stomach relax completely. Pull the lower part of your stomach upwards so that you lift your back (without arching it) away from the floor. Hold for 10 seconds. Keep breathing! Repeat 10 times.

5



**Back stabiliser** Kneel on all fours with your back straight. Tighten your stomach. Keeping your back in this position, raise one arm in front of you and hold for 10 seconds. Try to keep your pelvis level and don't rotate your body. Repeat 10 times each side. To progress, try lifting one leg behind you instead of your arm.

Arthritis Research UK

# Keeping active with back pain

It's important to keep active – research shows that bed rest for more than a couple of days can actually make your back pain worse. As well as the simple exercises in this pull-out, you should choose a form of exercise you enjoy and stick at it. Swimming, walking, yoga and Pilates are all great options if you have back pain.

Remember to keep exercising regularly, even after your back pain has cleared up!