

Back pain



**VERSUS
ARTHRITIS**

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We're the 10 million people living with arthritis. We're the carers, researchers, health professionals, friends and parents all united in our ambition to ensure that one day, no one will have to live with the pain, fatigue and isolation that arthritis causes.

We understand that every day is different. We know that what works for one person may not help someone else. Our information is a collaboration of experiences, research and facts. We aim to give you everything you need to know about your condition, the treatments available and the many options you can try, so you can make the best and most informed choices for your lifestyle.

We're always happy to hear from you whether it's with feedback on our information, to share your story, or just to find out more about the work of Versus Arthritis. Contact us at content@versusarthritis.org

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HELEDD'S STORY

My back pain started after I had my children in my early 30s.

A lot of women have back pain when they have kids. You can lose your core strength, you're lifting them a lot, and your posture might not be as good.

I got to the stage where I was rolling out of bed in the morning and limping after sitting.

It would wear me down as there was no relief.

I'm a GP and my job can be quite sedentary. After a full day's work at my desk, it would be very painful walking back to the house after driving home.

I sought help, and I saw a physio who told me it could be improved by doing relatively straightforward things, such as improving my posture and simple daily back exercises.

If I did the exercises, I usually didn't need to take painkillers. I also paid more attention to my posture.

I was then recommended to see another physio – he's also a personal trainer and has his own gym.

He worked on strengthening exercises. I had kept up my running, swimming and cycling, but it wasn't until I started doing simple back exercises and gym work that things started to get better.

I would have some pain with exercise but generally it didn't hurt more afterwards.

I am lucky that I love to exercise but I can find an excuse not to do it, so I understand why people avoid it. I booked sessions that I then felt obliged to attend. Now I do at least two regular gym sessions a week with friends and I find it easier to commit. There are ways to overcome most barriers.

It was helpful seeing professionals who had the confidence to say I didn't need x-rays or scans. Being a GP I know people often want to have these investigations, but most of the time they don't give us any more useful information, change the way someone's back pain is managed or lead to a better outcome.

You can't always give answers to everything, but that doesn't mean you can't do anything about it.

Having been through this experience I'm more sensitive to the impact back pain can have and I'm passionate about the importance of exercise. It really is the best thing to help with back pain.

I had this problem most days for eight years, and was beginning to think it wasn't solvable. With guidance, it was. In the end, it was quite simple to sort with basic exercises and general strengthening work in the gym, which I still do, and I've been pain free for around five years.

What should I know about back pain?

Back pain is a very common problem, and most of us will have it at some time in our lives.

It may be due to a simple muscle strain or there may not even be a specific cause. Back pain is not often a sign of something serious.

In most cases back pain gets better after a few weeks. If it does return, it's unlikely to be an ongoing problem.

The best thing to do is continue with your normal everyday activities and routine as soon as you can and to keep moving. Being active and exercising won't do you any harm. Even if you have a bit of pain and discomfort, it doesn't mean you're doing any damage to your back.

Staying active will help you get better quicker. Taking painkillers regularly for a few days can help you stay active. Being inactive is likely to make your back pain worse or last longer.

How is the back structured?

The spine, which is also called the backbone or spinal column, is one of the strongest parts of the body and gives us a great deal of flexibility.

It's made up of 24 bones, known as vertebrae (ver-ter-bray), one sitting on top of the other, with discs sitting in between these bones. The discs cushion the bones and help the spine move.

Strong **ligaments** and muscles around the vertebrae provide support and stability to the spine.

On either side of the spine, all the way up and down it, are small joints called 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 parts of the nerves are called the nerve roots (see Figure 2).

There are bones in the tailbone at the bottom of the back, which are fused together and have no discs in between.

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 1. Sections of the spine

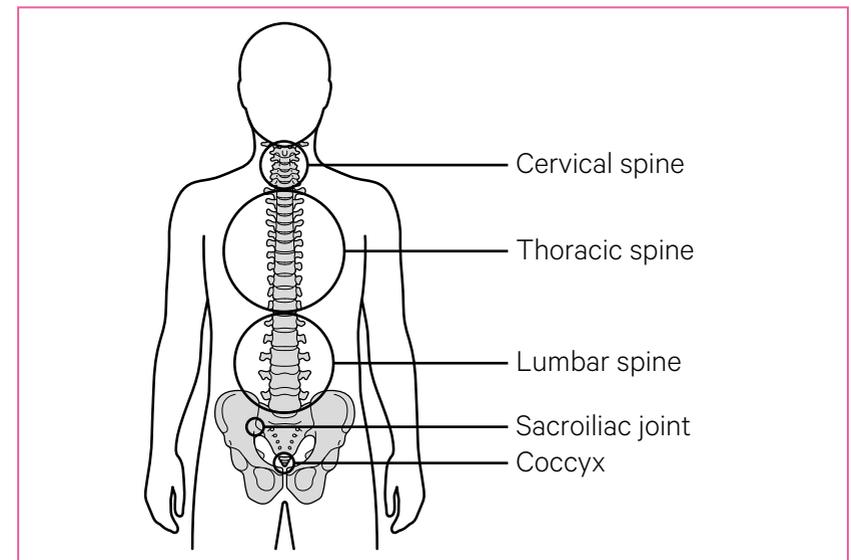
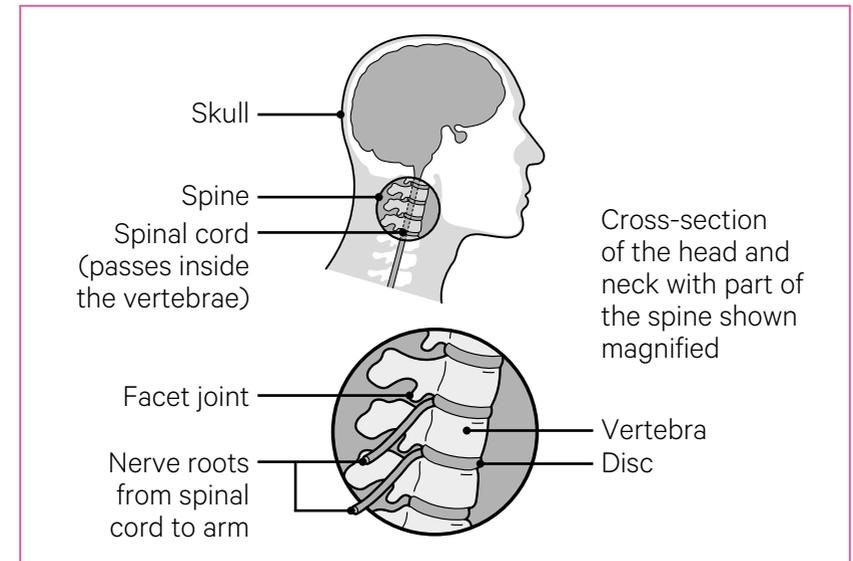




Figure 2. Structure of the head and neck



How can I manage my back pain?

The most important things to do are to keep moving, continue with everyday activities and have a healthy lifestyle.

There's also research to suggest that how you respond emotionally to having back pain has an important impact on how quickly you get better. The more positive you are and the more active you are, the quicker your back will get better.

Remember, if you're ever struggling, don't suffer in silence, talk to a healthcare professional, such as a GP or physiotherapist.

Why is it important to keep moving if I have back pain?

Keeping the muscles around the spine strong will provide more support to the bones and joints and take pressure off them.

Some people worry that if they have back pain, doing certain activities such as lifting things, twisting and turning might make their pain worse. It's important to remember that our backs and our spines are very strong and are designed to move.

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.



Regular exercise leads to shorter and less frequent episodes of back pain. It also releases chemicals called endorphins, which are the body's natural painkillers. These 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.

Taking some painkillers before you exercise can help.

It's better to choose a form of exercise you enjoy as you're more likely to stick to it. There are many forms of exercise that have helped people with back pain. Examples include:

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

While you can push yourself and build up to do strenuous exercise, it's important not to overdo it. If you're in pain that you can't cope with during or after your activity, you'll need to see a doctor. The key is to start off gently and to gradually increase the amount you do.

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.

If you're having any trouble exercising, it can be a good idea to see a GP or ask for a referral to a physiotherapist for specific exercise advice for you. If you're a member of a gym, there may be personal trainers there who can give you expert advice. Make sure you tell them about your condition.

Yoga

Research has 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 yoga instructor before you start so they're aware that you have back pain.

Pilates

Pilates is another form of exercise that can help to strengthen muscles around the core of the body, including the back. This can give more support to the back. Pilates classes run by a teacher with specialist training who is able to tailor sessions for people with back pain might help you.

Look for a Pilates instructor who has a good reputation, and the right training and qualifications.

Painkillers

Painkillers such as paracetamol may help to reduce pain and allow you to continue with your everyday activities. 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.

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.

There are also anti-inflammatory creams or gels that can be rubbed onto affected areas.

If you have any questions or concerns about what drugs you can take and the dosage, talk to a doctor or a pharmacist.

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

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 microwavable wheat bag or a hot-water bottle.

A warm bath or hot shower can have a similar soothing effect.

An ice pack bought from a chemist, or even just a bag of frozen peas, can also be helpful.

You may find that alternating between heat and ice therapy throughout a day or week can help.

Make sure you protect your skin from direct contact with heat or ice packs to avoid burns or irritation of your skin. A tea towel over the heat or ice pack is one way to do that. Read the instructions carefully if you have bought a heat or ice therapy product. Applying ice or heat for about 15 to 20 minutes at a time, is normally enough.

Posture

Posture means the position in which you hold your body. Try to maintain good posture when sitting and standing.

Slouching or being in awkward positions while working or driving will affect the soft tissues in your back that support your spine. This could increase your pain or your recovery time.

Try to change your posture often, because remaining in the same position for too long can make the pain worse.



Lifting correctly

Learning to lift correctly may help to prevent further episodes of back pain.

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. If you're wearing a back pack, use both straps to spread the weight.

Avoid lifting anything that is too heavy for you, or which is large and an awkward shape. Always ask for help if you need it.

Diet and nutrition

There are no special diets that have been shown to either 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.

What's recommended for us all is a well-balanced and healthy diet, which is low in saturated fats, sugar and salt. It's also a very good idea to eat plenty of fresh fruit and vegetables, and to drink plenty of water.

If you need to lose weight, the key is to regularly burn off more energy than you consume on a daily basis. The combination of staying active and eating a healthy diet will help you achieve this.

What if my back pain is affecting my work?

Getting back to work sooner rather than later helps most people with back pain.

This will help your back pain itself, as staying active and keeping the back moving will help you get better sooner. It will also make you feel better about yourself as time off work has been shown to affect people's mood.

In the past, people were advised to rest in bed. We now realise this does more harm than good and that it's better to keep moving, even if you need to take some painkillers to allow you to do so.

Most people can return to work within two to three days, although the length of time off work varies with the individual and the type of job you do.

You don't need to wait until your back problem has completely gone. In many cases, the longer you're off work the more likely you'll develop longer-term problems and the less likely you are to return to work.

It's important to keep in contact with your employer and discuss what can be done to help you return to work. If your work involves heavy lifting or other physically demanding tasks, you may need to do lighter duties or fewer hours for a while.

If you have an occupational health advisor through your job, they can help suggest what work you are fit to do and arrange any simple adjustments to your work or workplace to help you stay at work.

For roles that involve working at a computer screen, make sure that your chair and desk are at the correct height for you. Your lower back should be well supported, and you should be able to put your feet on the floor. If you can't, you might need a foot rest. You should avoid stretching to reach things like your mouse, keyboard or phone.



Back pain information booklet

Ask for a workplace assessment and tell whoever carries it out about your back pain. When working, try to take regular breaks and have a stretch and walk around. Maybe set a timer on your phone or computer to remind you to do this at least once an hour.

If you're having any difficulties travelling to or from work or need an item of equipment, the Government's Access to Work Scheme (www.gov.uk/access-to-work) might be able to help.

If you're unable to get back to work after two weeks of absence because of your back pain, you should talk to your GP and employer about arranging **physiotherapy** or other treatment to get you moving again.

You can get further advice through your local Jobcentre Plus and the Government's Fit for Work website:
www.gov.uk/government/collections/fit-for-work-guidance



What causes back pain?

Often back pain doesn't have one simple cause. It's important to remember that pain doesn't necessarily mean there's a serious problem.

It may be due to one or more of the following:

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

There are also specific conditions linked with pain felt in the back. Some common conditions are listed below.

Spondylosis

As we grow older, the bones, discs and ligaments in the spine can naturally weaken as they age. This happens to all of us to some degree as part of the ageing process, but it doesn't have to be a problem and not everyone will have pain from this.

As we grow older the discs in the spine become thinner and the spaces between the vertebrae become narrower. Little pieces of bone, known as **osteophytes**, may form at the edges of the vertebrae and facet joints.

The medical term for this is spondylosis and this is very similar to the changes caused by **osteoarthritis** in other joints.

Keeping the spine supple and the muscles around the spine and pelvis strong, will reduce the impact of spondylosis.

Sciatica and referred leg pain

Back pain can sometimes spread to one or both legs, and there may be numbness or a tingling feeling. When the leg pain is caused by a trapped nerve in the low back, it's often called sciatica (siy-a-ticker). For most people with sciatica, the leg pain can be the worst part and occasionally they may have little or no back pain at all.

You might also hear the phrase 'referred leg pain'. This is when the pain you feel in the leg is not because of a trapped nerve, but it may be caused by other tissues in the spine such as muscles or joints.

Sciatica is often caused by a bulging disc pressing on a nerve. Discs are designed to bulge so we can move our spines easily, but sometimes a bulge can irritate or compress a nerve root and cause the pain that travels all the way down the leg to the foot.

Sciatica is not very common, and most people recover fairly quickly from it, although in some cases it might take a number of months.

Starting gentle exercise as soon as you can is likely to help with sciatica or referred leg pain. It is also a very good idea to see a physiotherapist who can help guide you through your recovery.

Spinal stenosis

Sometimes back pain is linked with pain in the legs which starts after you start walking for a few minutes, and then tends to get better very quickly when you sit down. This is known as spinal stenosis.

This can happen from birth or can develop as we get older.

Problems are caused when there is a reduction in the small space in the middle of the spine, where the nerves are. This space, which is called the spinal canal or nerve root canal, can be narrowed by bone or ligament.

Symptoms often affect both legs, but one may be worse than the other. The pain usually gets better when you sit down and rest, and some people find they have less pain 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 serious problems. However, 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, which is known as **osteoporosis**
- an infection
- a tumour
- **inflammation**, which causes **spondyloarthritis**. For example, **ankylosing spondylitis** is a type of spondyloarthritis.



Should I see a doctor?

Most cases of back pain tend to clear up without the need to see a doctor.

You should see your doctor if your pain:

- is really bad
- lasts for a long time
- stops you from working or doing the things you enjoy
- affects your everyday activities
- gets worse.

If the pain is causing you significant problems and stops you from getting on with normal life and work activities, your doctor will examine you and ask you questions.

These questions will help predict how likely it is that you need further help with your back pain. If you do need further support, your doctor will make a referral to physiotherapy so that you can have treatment early, to help with the pain and allow you to return to normal activities.

If you're concerned about the cause of your back pain, it can help to talk openly about any worries with a healthcare professional, as reducing any fear may help speed up your recovery.

What are the warning signs of a serious problem?

Very rarely back pain or pain that travels down the legs is a sign of a serious problem.

If you have any of the following symptoms, you should seek urgent medical attention:

- difficulty controlling or passing urine

- loss of control of your bowels
- numbness around your back passage or your genitals
- weakness in your legs so you find standing difficult
- severe and ongoing back pain that gets worse over several weeks
- changes in sexual function, for example, men being unable to get an erection.

The symptoms listed above could potentially be linked to a rare but serious condition called cauda equina syndrome. This involves the nerves at the base of the spine being pressed on or squeezed. You should speak to your GP the same day your symptoms start or go to an A&E department.



How is back pain likely to affect me?

It's hard to say how long your symptoms will last because diagnosing the cause of back pain is often difficult.

Most people with back pain will recover within a few weeks. However, the pain does tend to come back every now and then, similar to the way headaches or colds can come back.

There are several things that can be linked to ongoing back problems. Pain can 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.

If the back problem has been present for a long time, then the symptoms are more likely to keep coming back. However, most people with long-term back pain 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 that hurt mean you're damaging your back.

What if my back pain becomes a long-term problem?

Often we don't know why someone has long-term back pain. Even if a cause can be found, for example 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. Low mood and anxiety can make pain worse. All of this might not make you feel like exercising, so your muscles become weaker still, and so it goes on.

This can happen to anyone, and the longer it goes on the harder it'll be for you to recover your movement and confidence. It's therefore 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. This is because most cases of back pain improve by themselves within a week or two. 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, for example a bad fall
- your doctor suspects that there may be an underlying cause for your pain
- 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.

X-rays are much less commonly used because back pain is often caused by problems with soft tissues, such as ligaments and muscles, which can't be seen on x-rays.

Remember that sometimes even after a thorough investigation, it might not be possible to say for certain what's causing your back pain.

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 people will need further medical treatment.

Physical therapies

Physiotherapy can be useful to improve your strength and flexibility. A physiotherapist can help oversee your exercise programme and recommend specific exercises to help.

Manual therapies, which are sometimes called 'hands-on' treatments, such as manipulation and mobilisation of the spinal joints can help your recovery.

These techniques are usually carried out as part of **osteopathy**, **chiropractic** or physiotherapy treatment. They work best when carried out alongside regular exercise.

These therapies might not be suitable for all back conditions. Talk to your doctor or your therapist if you're thinking of trying one of these.

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 alternative 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 rely on aids or gadgets instead of trying to get back to your daily activities.

Drugs

If standard painkillers or non-steroidal anti-inflammatory drugs (NSAIDs) aren't working for you, 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.

Gabapentin and pregabalin

Gabapentin and pregabalin aren't usually given as a first-line treatment for 'ordinary' back pain. If other medications are not helping, gabapentin and pregabalin can be tried in cases of troublesome and long-lasting back pain and sciatica.

As with all pain medications, these can be helpful for some people but not for everyone. 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.

Injections

Sometimes injections are useful for back pain or sciatica that is more severe, or if the usual treatments, like physiotherapy and painkillers, aren't working well enough.

For sciatica, there are injections called epidurals. This involves an injection of a steroid, which is a strong anti-inflammatory medicine, and anaesthetic, near the spine or through the tailbone, to try to help with pain from a 'trapped' nerve root.

Another type of injection, called radiofrequency denervation, might be used if it's thought that the back pain comes from changes that happen over time to the small joints in the spine called facet joints.

Your doctor will send you to see a specialist, to discuss if injections might be an option for your back pain or your sciatica pain. These injections are not always successful, but they might help some people.



Talking therapies and pain management programmes

Back pain, especially if it lasts for a long time, can affect people's mood. If you're feeling low or anxious, it's important to talk to someone such as a partner, relative, friend or a doctor. Talking therapies can also be useful.

For example, cognitive behaviour therapy (CBT) can help people with back pain. The aim is to help people deal with problems in a more positive way, by breaking them down into smaller parts. Your doctor may be able to refer you for CBT, or you might like to consider going private.

Pain management programmes may help you control your pain and teach you how to live with long-term pain. They're usually outpatient sessions (you don't stay in hospital) and involve learning about pain from a physical point of view, but also how it affects your mood and emotional well-being. The sessions will then look at what you can do to overcome difficulties.

Keeping socially and physically active is an important part of helping with low mood and anxiety, and it also helps with pain. Simple things, such as joining a local leisure centre, sports club, walking group, gardening group, or just getting out and seeing friends for a coffee on a regular basis might really help you.

Complementary treatments

There are many different complementary treatments that are believed to help with pain relief, and some people do feel better when they use them.

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. This is a treatment from ancient Chinese medicine. Very fine needles are inserted, virtually painlessly, at a number of sites around the body, but not necessarily at the painful area.

Acupuncture is thought to work by diverting or changing the sensations that are sent to the brain from painful tissues and by stimulating the body's own pain-relieving hormones, known as endorphins.

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 tension in muscles and fatigue, and improve circulation, which all work to reduce pain levels.

Talk to your doctor before you try any complementary treatment. The key is to choose a therapist or a supplier who is a member of a relevant body and is fully insured.

Surgery

Very few people with back pain 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, for example medication and physiotherapy.

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



ZAI'S STORY

I am 70 and my sciatica started when I was 62. I woke up one night at 3am for my prayers, but I just couldn't walk.

The pain was searing, I couldn't put my foot down. I was crying.

I had to go to hospital for tests. It took a very long time to find out what it was.

I was given steroid injections. They worked for a bit, and then they stopped working.

Back pain information booklet

I was put on tramadol. I was hooked. I thought, I'm coming off this.

In the circumstances, when you are in terrible pain you just want the pain to go away and you take it. I had to come off the tramadol because of the way it made me feel.

Now I have so much control on my own health and my own condition.

I am always telling people, if you are positive, then things are much more likely to go positively for you.

If you are negative, things are much more likely to go negatively.

If you are in pain, it can be easy to rely on a tablet. But now, I help myself with a positive mind. I do yoga four times a week and that really helps me. I do it at home with yoga I have learned from the TV. That really helps me. I also do some Pilates that I have learned. And I walk a lot.

I have a healthy diet. I don't eat red meat more than once a month. I eat lots of salads, olives and apricots, bit of cheese and a bit of milk. I stopped with the sugar. I used to have sugar in my tea, but now I only have artificial sweetener in anything. Indian spices help me, such as cinnamon and fennel.

For three or four months I was very down, but I didn't want any help.

I couldn't walk for three months and I was crying every day, and I don't generally cry.

I am much better now, the pain does come and go. But I don't sit and cry over it now.

If I am standing for a long time cooking, I might need to sit down.

But I am a very positive person and I don't give up in a hurry. Positivity helps with anything and everything in life, every area of life. Be positive and don't give up. You have got to help yourself.

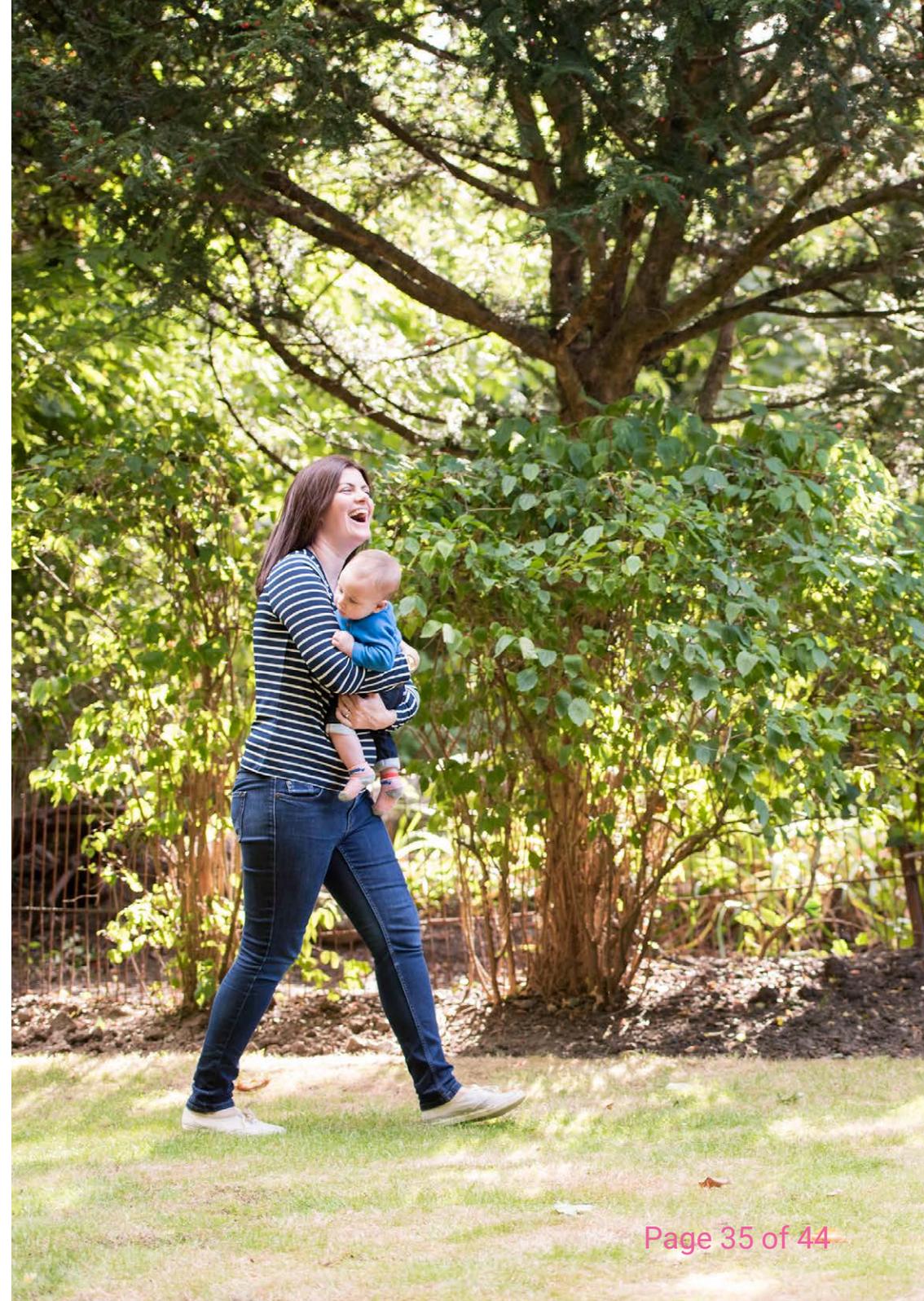
Research and new developments

Our research has helped to improve the management of lower back pain. Researchers at our primary care centre in Keele developed the STarT Back Tool, which is used to help clinicians when deciding what treatment is needed for patients with lower back pain.

This targeted approach to treatment has been shown to lead to a reduction in patient-reported disability, fewer days off work and significant cost savings to both the NHS and the wider society. Use of the STarT Back Tool for non-specific low back pain is recommended by organisations including the Royal College of General Practitioners and NICE, and has been adopted by services both in the UK and worldwide.

We're supporting research examining why some people with spondylosis in their lower spine have a lot of pain whilst others have little or no pain. This study will examine how people with and without low back pain move and function, and the results will help physiotherapists to deliver the right care to patients in the right way, making physiotherapy more effective and leading to improved outcomes and quality of life for patients.

We're also looking at the role genes play in causing back pain. Our researchers are looking closely at bony lumps caused in spondylosis known as osteophytes, and the problems they can cause by putting pressure on nerves. For this work we're using zebrafish to study spinal conditions with the aim to help understand how specific genes cause spinal osteoarthritis. Zebrafish are good models to use because of surprising similarities within their anatomy to the human spine.





Computerised Tomography (CT) scan

A computerised tomography (CT) scan, sometimes called CAT scans, are used by radiographers to take detailed pictures of the structures inside the body - such as bones, blood vessels and organs. These different images are then joined together using a computer programme to make a whole picture.

Inflammation

Inflammation is the immune system's response to infection, bacteria or injury. Blood and fluid rushes to the affected area, making it appear hot, red and swollen.

MRI (Magnetic resonance imaging)

MRI (Magnetic resonance imaging) is a scan that uses magnets to look at what is happening inside your body. An MRI scan can show soft-tissue damage - in the muscles, ligaments or nerves - as well as any problems with the bones.

Non-steroidal anti-inflammatory drugs (NSAIDs)

Non-steroidal anti-inflammatory drugs (NSAIDs) are drugs given for different kinds of arthritis that reduce inflammation and control pain, swelling and stiffness. Common examples include ibuprofen, naproxen and diclofenac.

Occupational therapist

An occupational therapist is a trained specialist who can suggest changes to your daily life and how you do things. This can sometimes entail the use of specialist equipment.

Osteoarthritis

Osteoarthritis is the most common form of arthritis. It causes damage to the surfaces of a joint which can lead to pain, swelling and stiffness. Osteoarthritis mainly affects the hands, knees and hips.

Glossary

Ankylosing spondylitis

Ankylosing spondylitis is a long-term inflammatory condition that affects the spine's flexibility. It can also cause inflammation in large joints.

Chiropractic

Chiropractic is a treatment for conditions affecting the bones, muscles and joints, often involving manipulation or adjustment of the spine, provided by a chiropractor. It is considered a complimentary treatment and is not normally available on the NHS. In the UK it is regulated by the General Chiropractic Council.

Back pain information booklet

Osteopathy

In osteopathy, a professional will stretch, massage and move your muscles and joints. This can help you move more easily and make your muscles feel less tense.

Osteophyte

An osteophyte is a small lump of new bone that grows at the edges of a bone in a joint. They don't always cause problems but they may cause pain if they press on a nearby nerve.

Osteoporosis

Osteoporosis is a condition where bones become less dense and more fragile. This means they can break, fracture or crumble more easily. Steroid treatment can increase the risk of developing osteoporosis.

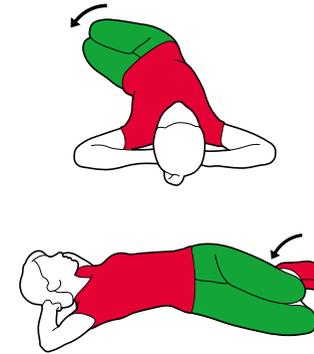
Physiotherapy

Physiotherapy is a therapy given by a trained specialist (physiotherapist) that consists of a combination of exercise, massage and other techniques. It helps to ease pain and keep your muscles and joints mobile.

Spondyloarthritis

Spondyloarthritis is the name for a group of conditions that can cause pain, swelling and stiffness around the spine, as well as in other joints around the body.

Stretching exercises



1. Back stretch (stretches back muscles)

Lie on your back. Bend your knees and, keeping your feet on the floor, roll your knees to one side, slowly. Stay on one side for between 5-10 seconds. Repeat three times each side. Try to always keep your knees together.

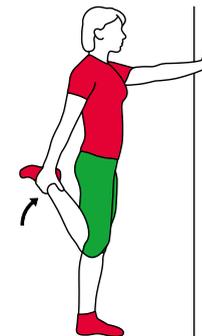
2. Deep lunge (stretches muscles in front of thigh and abdomen)

Kneel on one knee, the other foot in front. Lift your back knee up, making sure you keep looking forwards. Push your hips forward. Hold for five seconds and repeat three times each side. Try to keep your upper body upright, avoid bending or leaning your upper body forwards.



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. Try to keep your knees and thighs level with one another.





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.



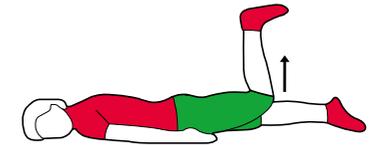
5. Knee to chest (stretches muscles of bottom – gluteal muscles)

Lie on your back. Bring one knee up and pull it gently towards your chest for five seconds. Repeat for up to five times each side.



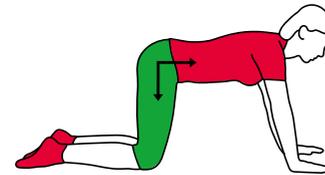
2. Stomach tone (works the transverse tummy muscles)

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!



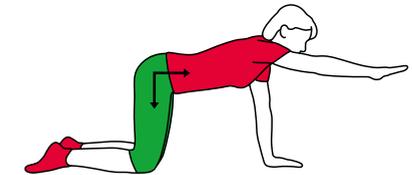
3. Buttock tone (works the gluteals)

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)

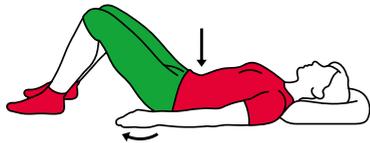
Kneel on all fours with a small curve in your lower back. Let your stomach relax completely. Pull the lower part of your stomach upwards so that you lift your back (without arching it) away from the floor. Hold for 10 seconds. Keep breathing! Repeat 10 times.



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 raising your arm.

Strength and stamina 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.

Where can I find out more?

If you've found this information useful, you might be interested in other titles from our range. You can download all of our booklets from our website www.versusarthritis.org or order them by contacting our Helpline. If you wish to order by post, our address can be found on the back of this booklet.

Bulk orders

For bulk orders, please contact our warehouse, APS, directly to place an order:

Phone: 0800 515 209

Email: info@versusarthritis.org

Tell us what you think

All of our information is created with you in mind. And we want to know if we are getting it right. If you have any thoughts or suggestions on how we could improve our information, we would love to hear from you.

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

Thank you!

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We would also like to give a special thank you to the people who shared their stories, opinions and thoughts on the booklet. Your contributions make sure the information we provide is relevant and suitable for everyone.

Talk to us

Helpline

You don't need to face arthritis alone. Our advisors aim to bring all of the information and advice about arthritis into one place to provide tailored support for you.

Helpline: 0800 5200 520

Email: helpline@versusarthritis.org

Our offices

We have offices in each country of the UK. Please get in touch to find out what services and support we offer in your area:

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Wales

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Back pain

Back pain is a very common problem that affects many people. It isn't usually a sign of something serious. The most important things to do are stay active, keep up your normal routine and remain positive. In this booklet we will give you some tips on how to manage back pain.

For information please visit our website:

versusarthritis.org

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