

Patient information from the BMJ Group

Back pain

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Back pain

Most of us have back pain at some time in our lives. When we get it we usually just feel like staying in bed. But staying in bed usually does more harm than good. It can be hard to find out why you have back pain, but there are treatments that can often help.

We've brought together the best research about back pain and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

What is back pain?

Most of us have back pain at some time in our lives. Bad back pain can make you feel miserable but it usually clears up on its own.

Here we look at low back pain, which is the type most people get.

Key points for people with back pain

- Back pain is common but normally not serious. Most people get better within six weeks.
- Your doctor probably won't be able to tell you exactly what is causing your pain. In most people, the cause is never found.
- Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, can help to relieve back pain.
- If your back pain lasts for more than 12 weeks, exercises to strengthen your back can help.
- Staying in bed usually does more harm than good.
- Staying active can help you get better faster.

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Your back

To understand why you get back pain, it helps to know about how your backbone (your spine) works.

- Your spine holds up the weight of your upper body.
- Your spine is like a tower built from 33 small, interlocking bones. These bones are called vertebrae (each individual one is called a **vertebra**).
- Between each vertebra is a disc. These are round pads of soft, spongy tissue. Each disc has a tough outer ring and a soft, jelly-like centre. The discs cushion the bones in your spine and stop them being damaged when you jump or run.
- Each vertebra is linked to the next one by small joints that lock together. They are called **facet joints**. These joints make your spine flexible so you can bend and twist it.
- A bundle of nerves runs down from your brain into the middle of your spine and goes down to the bottom of it. This is your **spinal cord**.
- Each vertebra has a hole in the middle. The holes make a tunnel all the way down your back. This is where your spinal cord is.
- Nerves from your spinal cord pass through small openings between the bones in your spine. These nerves branch off to every part of your body.
- Nerves coming out of the base of your spine join up with your **sciatic nerves**. These are the main nerves in your legs. You have one sciatic nerve running down each of your legs.

How your back is held together

As well as bones, joints, discs, and nerves, your back is made up of muscles, tendons, and ligaments. They allow you to bend, stretch, and twist.

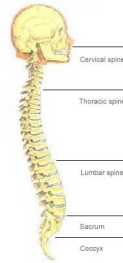
- **Ligaments** are tough, shiny bands of tissue that hold your vertebrae together and guide the spine's movement. Their job is to try to stop your spine from making any movements that might damage it. Because ligaments aren't very flexible, they can easily be overstretched.
- **Muscles around your spine** work together to help your back move. As one muscle group tightens (contracts), another group relaxes. So, if you bend forward, the muscles in the front of your chest tighten while the muscles in the upper part of your back relax.

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- **Tendons** are tough cords covered by a lubricated sheath. They join your muscles to the bones in your back.

Your back pain

Your back pain may come on suddenly or gradually, and the pain may be very bad or relatively mild. Back pain can be very painful and can make your day-to-day life difficult. You may be unable to get dressed, move around, or sleep. But however much it hurts, your back will probably get better by itself, usually within a few weeks. ^[1]



The spinal column.

Pain that is only in your back

This is the most common type of back pain. It can either be a sharp pain or a dull pain. It may be mild for some people, but very bad for others. You may have it all the time or it may come and go. You could find that your back pain gets worse when you do certain things, or when you change how you are sitting or standing.

It's not usually possible to know what's causing this type of back pain. It could be a strained muscle in your back. (A strained muscle has been overstretched or torn.) But you'll probably get better without knowing why it happened.

Pain down your leg

You may have a pain that's just around your legs or a pain in your back as well. The pain could be in your groin, buttock, or upper thigh. Sometimes, it can be below your knee. The pain can be dull and achy and it can move around. It tends to come and go and can vary between being mild to being very bad. You may also get some numbness and tingling.

When you get a pain like this down your leg it is called nerve root pain. You get this type of pain when a nerve coming out from between the bones in your spine gets trapped or damaged (this type of nerve is sometimes called a nerve root). This type of pain is also called **sciatica**. This is because it is thought to affect the sciatic nerves. (The sciatic nerves are the main nerves that run down your legs. You have one in each leg.)

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If your spine puts pressure on your sciatic nerves, it can cause a pain that runs down your legs.

Sciatica can be caused by a damaged disc (one of the small cushions that protect the bones in your spine) pressing on a nerve. This is sometimes called a slipped disc. For more information, see [Slipped disc](#). But it can also be caused by other conditions, such as [arthritis](#) or [diabetes](#). Or it can happen if nerves in your spine are damaged when you have surgery on your spine.

Is your back pain acute or chronic?

Your doctor may say your back pain is either acute or chronic. These terms can mean different things to different doctors. But, generally:

- Acute back pain lasts for 12 weeks or less. It is also called short-term back pain. ^[1]
- Chronic back pain is when you've had pain for more than 12 weeks. It is also called long-term back pain. ^[2]

If you have had a number of acute bouts of pain, with short periods of relief between them, doctors say that you have recurrent back pain.

What goes wrong?

Your doctor probably won't be able to say exactly what is causing your back pain. In up to 85 in every 100 people with back pain, no cause is ever found. You may be told you have 'a strain', 'a sprain', or 'lumbago', which are all terms used to describe this type of back pain. ^[2]

We describe some common causes of back pain below. But please remember that only about 15 in 100 people with back pain will ever find out the exact cause.

Poor posture

Your posture is how you hold different parts of your body when you're resting or doing things. Poor posture may cause back pain in some people. ^[3] But there hasn't been much research on this, so we can't be sure that poor posture causes back pain. You may get poor posture because of a habit, such as always slumping when you sit in a chair or always standing with your shoulders and back hunched. Poor posture can put pressure on different parts of your back. For example, some muscles may become weaker than

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others and this means they are more likely to get damaged. If muscles become weak, it can also affect the position of your spine and this can lead to back pain.

Wear and tear on the bones in your spine

As you get older, the discs in your spine can dry out. If this happens, they can't cushion and protect the bones in your spine (the vertebrae) in the way they should. The edges of the vertebrae can then wear away, which can cause back pain. The vertebrae may grow small bony bumps called 'spurs'. These spurs can cause pain by pressing on nerves. The pain can travel down your legs, past your knees and into your feet. The general wear and tear of the vertebrae can also cause back pain.

About 8 in 10 men and 6 in 10 women have some wear and tear of the spine by the time they are 49 years old. ^[4] By the age of 79 years, all of us will have some. ^[4] Your doctor might call this natural wear and tear of the bones, which is known as [osteoarthritis](#) .

Strained muscles and ligaments

Your back pain may be caused by a strained (stretched or torn) **ligament** or muscle. ^[4] This can happen when you lift something heavy or simply move awkwardly. It can also happen when you use a group of muscles that you're not used to using. The ligaments that join bones in your back together are not very elastic, so they can be pulled easily.



Muscles, tendons and ligaments help you bend, stretch, and twist.

Slipped disc

You can get back pain when a disc in your back is damaged. If a disc tears, then its jelly-like centre bulges through the tear and may press on the nerves coming out of your spinal cord. Tissues around the damaged disc may become **inflamed** and sore. Doctors call this a **herniated disc**, or you may hear it called a prolapsed or ruptured disc. It's more commonly known as a slipped disc.

Poor posture or strenuous activity, such as heavy lifting, can damage discs. Sitting down for long periods of time puts more pressure on the discs and vertebrae in the lower part of your back than standing does. This is because your lower back has to support the whole weight of your upper body when you are sitting, with no help from your legs.

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Poor posture or strenuous activity, such as heavy lifting, can damage discs.

Bear in mind that a slipped disc is not a common cause of back pain. Only about 4 in 100 people with back pain caused by a physical problem have a slipped disc. ^[2]

A slipped disc is the most common cause of the type of pain that goes down your leg (and sometimes below your knee and into your foot). This type of pain is called nerve root pain or sciatica. It may be caused by the disc bulging and pressing on the nerves leaving the spine that join up with the sciatic nerves. (The sciatic nerves are the main nerves in your legs. You have one in each leg.)

You can get a serious complication from a slipped disc. It is called **cauda equine syndrome**. It happens when bits from a damaged disc press on the bundles of nerves at the base of your spine. You may not be able to walk and you may not be able to control when you go to the toilet. You may also feel numb in your bottom. This is an emergency and you should see your doctor straight away if you get any of those symptoms. You may need emergency surgery to stop the pressure on the nerves.

We look at slipped disc and treatments for it separately. See our articles on [Slipped disc](#) to find out more.

Trapped nerves

Your pain may be caused by nerves that have become trapped or damaged where they run out from between the vertebrae. This can happen if you have a disc pressing on one of the nerve roots. Nerves at the base of your spine join up with the sciatic nerves. If a disc is pressing on these nerves, you may feel very bad pain in your legs, buttocks, thighs, and feet. This is sometimes called sciatica. It usually gets better on its own. Half of all people with sciatica make a full recovery within a month. ^[5]

Thinning bones (osteoporosis)

If you have a condition called osteoporosis, the bones in your back become weaker and may break or collapse without you knowing it. This can cause back pain. To learn more, see our articles on [Osteoporosis](#) .

Other things that can go wrong

The causes listed above are the most common causes of back pain. But back pain can sometimes be a symptom of another problem. Some people can get back pain because their spinal canal has narrowed. This is called **spinal stenosis** and it's common among people older than 60. If you have spinal stenosis you may need more intensive treatment such as surgery. ^[3]

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Another condition that causes back pain is called **ankylosing spondylitis**. This condition makes the joints in your spine become inflamed, which can cause damage. It usually affects young adults.^[2] But it is rare. About 3 in 1,000 people with back pain have this condition.^[6] Ankylosing spondylitis is more than twice as common in men than in women.

Back pain can also be caused by serious conditions such as cancer, as well as certain infections, but this is rare.^[6] When examining someone with back pain, doctors usually check to see if it could be caused by any other disease. If you're worried or not sure that your doctor has checked for these other causes, then ask.

It's possible that the pain you're experiencing might be referred pain. This means that the problem is somewhere else in your body (in your abdomen, for example), but you're experiencing the pain in your lower back.

To find out more, see [More about the causes of back pain](#) .

Back pain: why me?

Doctors don't know why some people are more likely to get back pain than others. Things that increase your chances of getting back pain are called risk factors.

Here are the main risk factors for low back pain.^[4]

- Getting older.
- Doing heavy physical work, especially if it involves heavy lifting, twisting, and working with vibrating machinery. This can put a lot of strain on your back.
- Staying in one position for a long time. For example, if you have a job that involves a lot of driving, you could be at risk.
- Being obese (being very overweight). Carrying extra weight around can strain your back. If you want to find out whether you are overweight, you can work out your body mass index (BMI) using our [calculator](#) . Your body mass index compares your height with your weight.
- Suffering from stress at work or from mental health problems such as anxiety or depression.

What are the symptoms of back pain?

The symptoms of back pain vary, and it is not always easy to find out what is causing them.

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Common symptoms

Aches, spasm, and stiffness

You may have painful muscle spasms in your back. (Muscle spasms are when your muscles tighten on their own). These are very common, as your back has a network of muscles and nerves that can easily be strained or torn.^[5] The pain may be a constant dull ache, or it may be sharp and burn when you move around. Your back may be tender when you touch it.

Pain, tingling, weakness, or numbness in one of your legs

This type of pain is sometimes called sciatica.^[3] It's usually caused by a damaged disc (also called a [slipped disc](#)) pressing on nerves leaving the spine that join up with your sciatic nerves. Your sciatic nerves are the main nerves in your legs. You have one sciatic nerve running down each of your legs.

Even though the problem is in your back, you might feel more pain in one of your legs. The pain may feel like it is travelling all the way from the top of your leg to your foot. This pain might get worse when you cough or sneeze, or when you lift things. Or, it might hurt more when you sit or stand in particular positions.^[8]

Finding it difficult to move

Putting up with the pain is hard enough, but it can be even more frustrating when it stops you from doing your normal activities. It's worth talking to your doctor about this. To find out why you have the pain, your doctor should investigate which of your movements are restricted by your pain and which ones aren't.^[9]

Symptoms that mean you need to see a doctor

High fever

If you have a high fever with your pain, let your doctor know because you may have an infection.^[2]

Pain when you are resting

If you find that you still have pain at night when you're lying down, or if the pain gets worse at night, tell your doctor. Pain at night is a very common symptom of back problems, but there is a very small chance that you could have a tumour.^[3] This is more likely if you have had cancer before. Make sure your doctor knows your complete medical history.^[2]

Warning signs of something more serious

If you have very bad back pain and you also lose control of your bowel or bladder (you can't control when you need to go to the toilet), or if your arms or legs feel numb or weak, you need to see a doctor urgently.

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You may have a damaged disc that is pressing on your spinal cord (doctors call this **spinal cord compression**). Or a damaged disc could be pressing on the nerves that run down from the bottom of the spinal cord. Doctors call these nerves the **cauda equina**. If these nerves are being damaged, it's called cauda equina syndrome.

We haven't looked at treatments for spinal cord compression or cauda equina syndrome. But they are medical emergencies. If you have these symptoms, you may need urgent surgery to relieve the pressure on the affected nerves.

How do doctors diagnose back pain?

Your back pain will probably get better by itself. But you may wish to see your doctor if the pain is bad, if you are worried about it, or if it doesn't get better after a few weeks.

Your doctor probably won't be able to find what's causing your back pain. But he or she will be able to check that it isn't caused by more serious health problems.

Seeing your GP

Your GP will ask you some questions about how and when your symptoms started. And you'll probably have a physical examination.^[2] This helps to rule out some serious conditions that can cause back pain and sciatica. Sciatica is when you get a pain that runs down your leg. It can be caused by a damaged disc pressing on the nerves leaving the spine that join up with the sciatic nerves in your legs.

Your doctor will ask you about the pain and other feelings you have in different parts of your legs, feet, and toes. Your doctor may give you a pinprick on the back of your leg or on your foot to check that your sense of touch is working properly.

Your doctor may test the strength of your muscles by asking you to push against his or her hand. Your doctor will also test your reflexes in your knees and ankles by gently tapping with a special hammer just below your kneecaps and above your heels.

Straight leg test

Doctors often use the straight leg test to help find out if you have a damaged disc. Your doctor may ask you to lie on your back and then raise the painful leg, without bending your knee. Most people with a damaged disc get sciatica (a pain that runs down one leg) before their leg is two-thirds of the way up. It means you are likely to have a slipped disc.

^[2] To learn more, see our articles on [Slipped disc](#) .

After this test, your doctor may be able to reassure you that your back pain is not serious and will probably clear up on its own. He or she may give you advice about how to look after your back. If you have had back pain for more than 12 weeks, he or she may also suggest some exercises that could help. Your doctor can also prescribe painkillers if you need them.

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Seeing a specialist

Most cases of back pain get better on their own within a few weeks, so you probably won't need to see any other doctors apart from your GP. But if your back pain doesn't go away, your GP may refer you to a doctor who specialises in back problems.

You may be offered an **MRI scan** (a scan that uses a magnetic field) to check if the cause of your back pain is a slipped (damaged) disc, and to rule out more serious problems, such as cancer. You may also be offered a **CT scan** (a type of **X-ray**), but specialists think the MRI scan is better at finding out if anything is seriously wrong.

If you have had a fracture or an infection, or if your doctor thinks you may have cancer in your bones, you might have a **bone scan**. Pictures from the scanner usually show any areas where there is something unusual. If people do have tumours in their bones, most of them will show up in this type of scan.

Another type of scan, called a bone density scan, measures how thick your bones are. It is used to see if you have **osteoporosis**, which is a condition in which your bones become weak and brittle.

Usually, X-rays aren't used on their own to find out what is causing back pain.^[12] Although they can help to show any wear and tear of the spine, that's seen just as often in people who don't have back pain. So, having an X-ray won't help doctors to decide what's causing your back pain.^[12]

How common is back pain?

Back pain is very common.

- More than 70 in 100 of us get back pain at some time in our lives.^[10]
- Almost half of all adults in Britain get back pain that lasts at least a day each year.^[11]
- Back pain is most common between the ages of 35 and 55 years.^[10]

What treatments work for back pain?

Back pain can make you feel miserable, but it usually gets better on its own. And there are a range of treatments that can help relieve the pain and keep you moving. Your doctor may offer you a combination of these treatments.

We've divided the treatments into those for back pain that lasts for 12 weeks or less (acute or short-term back pain) and pain that goes on for longer than 12 weeks (chronic or long-term back pain).

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Key points about treating back pain

- Doctors usually advise people with back pain to stay as active as possible. Resting in bed can actually make your pain worse.
- Exercise can help people with long-term back pain. It's not clear whether it helps in the short term. It might be that it takes a while for exercises to improve the strength of your back.
- Painkillers can help reduce back pain. Your doctor may recommend paracetamol, or painkillers that also help reduce inflammation, like ibuprofen.
- Drugs that relax your muscles may also help with back pain. Unfortunately, they can cause unpleasant side effects like drowsiness or dizziness, and you can only take them for a short time.
- Having your spine manipulated by a trained therapist may help in the short term, but we don't know whether it helps with long-term back pain. There are also some rare but serious side effects to manipulation. There's a small chance this treatment could damage nerves or blood vessels in your spine.

The National Institute for Health and Care Excellence (NICE) has published guidelines about what treatments people should be offered for low back pain. See <http://guidance.nice.org.uk/CG88> for more information.

Treatments for back pain

What treatments work for back pain? We've weighed up the evidence and looked at which treatments work best. The treatment you need may depend on whether you have short-term or long-term back pain.

- [Treatments for short-term back pain](#) : By short-term pain, we mean pain that's lasted for 12 weeks or less. [More...](#)
- [Treatments for long-term back pain](#): By long-term pain, we mean pain that's lasted for more than 12 weeks. [More...](#)

Treatment Group 1

What treatments work for short-term back pain?

When we talk about short-term back pain, we mean pain that lasts for 12 weeks or less. Doctors sometimes call this acute back pain. Treatment can help with the pain, and may help stop your back pain becoming a long-term problem. We've also looked at treatments for [long-term back pain](#) .

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Key points about treating short-term back pain

- Staying in bed doesn't help if you have back pain. It won't make you any better, and could be harmful. Stay as active as you can.
- Drugs called **nonsteroidal anti-inflammatory drugs** (such as ibuprofen) can relieve back pain. But they can have side effects.
- Having your spine manipulated by a trained therapist can also work. It may help you get back to work. But in rare cases, manipulation can cause serious side effects by damaging blood vessels in your spine.
- There are lots of other treatments that haven't been properly tested. So we don't know if they work. They include **acupuncture**, back supports, **steroid** injections, massage, ice packs, and TENS (transcutaneous electrical nerve stimulation).

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

For help in deciding which treatment is best for you, see [How to use medical research in your health decisions](#).

Treatments for short-term back pain

Treatments that are likely to work

- [Staying active](#) : Your doctor may advise you to stay active to reduce your pain and speed up your recovery. [More...](#)
- [Nonsteroidal anti-inflammatory drugs](#) (NSAIDs): This is a group of drugs that reduce pain and inflammation. One of the most common is ibuprofen. [More...](#)
- [Painkillers](#) : These include over-the-counter treatments such as paracetamol, as well as stronger painkillers you can only get on prescription. [More...](#)

Treatments that work, but whose harms may outweigh benefits

- [Muscle relaxants](#) : These are drugs that can help with muscle spasms (when your muscles tighten on their own). They are a type of sedative. Doctors commonly prescribe one called diazepam. [More...](#)

Treatments that need further study

- [Acupuncture](#) : This is when thin needles are inserted into the skin at specific points in the body. [More...](#)

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- [Back schools](#) : These schools offer a series of classes where you learn how your back works and what can go wrong with it. [More...](#)
- [Back supports](#) : These are corsets, support belts, back braces, and jackets worn to support your back. [More...](#)
- [Behavioural therapy](#) : This involves learning how to change your behaviour and thinking to help you cope with the pain. [More...](#)
- [Biofeedback](#) : This treatment helps you learn to keep your muscles relaxed. [More...](#)
- [Epidural steroid injections](#) : Steroids are drugs that are injected into the base of your spine to reduce inflammation. [More...](#)
- [Exercise, including back exercises](#) : This is a programme of exercises to strengthen your back, keep you flexible, and increase your fitness. [More...](#)
- [Massage](#) : A therapist kneads, strokes, and manipulates the soft parts of your lower back, including your muscles. [More...](#)
- [Multidisciplinary treatment programmes](#) : These programmes are run by a team of professionals, including doctors, psychologists, and physiotherapists. [More...](#)
- [Temperature treatments](#) : These treatments include massage, ice, heat, and ultrasound. [More...](#)
- [Traction](#) : This treatment stretches your spine. A therapist does it by hand or using weights. [More...](#)
- [Transcutaneous electrical nerve stimulation \(TENS\)](#) : You wear a small battery-operated device (TENS unit) around your waist. It sends out small pulses of electricity to help relieve pain. [More...](#)
- [Spinal manipulation](#) : This is where a trained therapist moves the joints in your back. [More...](#)

Treatments that are likely to be ineffective or harmful

- [Bed rest](#) : This is when you stay in bed for a couple of days or more. [More...](#)

Treatment Group 2

What treatments work for long-term back pain?

When we talk about long-term back pain, we mean pain that lasts for longer than 12 weeks. Doctors sometimes call this chronic back pain. A chronic illness is one that lasts a long time. We've also looked at treatments for [short-term back pain](#) .

Key points about treating long-term back pain

- Exercise programmes can help chronic back pain and let you move about more.
- A multidisciplinary treatment programme may reduce your pain. You get help from doctors, [psychologists](#) , therapists, and social workers.
- Painkillers such as ibuprofen, paracetamol, and stronger drugs such as codeine, may help relieve back pain. But these drugs can cause side effects.
- A form of psychotherapy called behavioural therapy may be useful. It may help you find ways of coping better with pain. You might want to try this if other treatments don't help.

Treatments for long-term back pain

Treatments that work

- [Exercise, including back exercises](#) : This is a programme of exercises designed to strengthen your back, keep you flexible, and increase your general fitness. [More...](#)

Treatments that are likely to work

- [Painkillers](#) : These include over-the-counter treatments such as paracetamol, as well as stronger painkillers you can only get on prescription. [More...](#)
- [Behavioural therapy](#) : This involves learning how to change your behaviour and thoughts about your pain to help you to cope with it. [More...](#)
- [Acupuncture](#) : This is when thin needles are inserted into the skin at specific points in the body. [More...](#)
- [Massage](#) : A therapist kneads, strokes, and manipulates the soft parts of your lower back including the muscles. [More...](#)
- [Spinal manipulation](#) : A trained therapist moves your joints. [More...](#)
- [Multidisciplinary treatment programmes](#) : These are run by a team of professionals, including doctors, psychologists, and physiotherapists. [More...](#)

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- [Spinal fusion surgery](#) : This is an operation to join two bones in your spine. The aim is to make your spine more stable and reduce pain. This operation only tends to be recommended if other treatments haven't worked. [More...](#)

Treatments that work, but whose harms may outweigh benefits

- [Nonsteroidal anti-inflammatory drugs \(NSAIDs\)](#) : These drugs reduce pain and inflammation. The most common one is ibuprofen. [More...](#)
- [Muscle relaxants](#) : These are sedative-type drugs used to relieve muscle spasms. [More...](#)

Treatments that need further study

- [Antidepressants](#) : These drugs relieve depression and may also help with pain. Doctors often use a type of antidepressant called a tricyclic antidepressant for bad back pain. Examples of these are imipramine, amitriptyline, nortriptyline, and doxepin. [More...](#)
- [Artificial disc replacement surgery](#) : This operation aims to reduce back pain by replacing a damaged disc with an artificial one. [More...](#)
- [Back schools](#) : These schools offer a series of classes where you learn how your back works and what can go wrong with it. [More...](#)
- [Back supports](#) : These are corsets, support belts, back braces, and jackets worn to support your back. [More...](#)
- [Biofeedback](#) : This treatment helps you learn to keep your muscles relaxed. [More...](#)
- [Epidural steroid injections](#) : Steroids are injected into the base of your spine to reduce inflammation. [More...](#)
- [Facet joint injections](#) : Local anaesthetics or steroid drugs are injected into or near the joints linking together the small bones that make up your spine. [More...](#)
- [Injections into ligaments or trigger points](#) : These are injections into the muscles or ligaments near tender points in your lower back. [More...](#)
- [Radiofrequency denervation](#) : This procedure uses a heated probe to deactivate the nerves around a painful part of your spine. [More...](#)
- [Intradiscal electrothermal therapy \(IDETT\)](#) : This procedure uses a heated probe to try to reduce pain from a damaged disc in your back. [More...](#)

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- [Transcutaneous electrical nerve stimulation \(TENS\)](#) : A small battery-operated device (TENS unit) is worn around your waist and delivers continuous pulses of electricity to help relieve pain. [More...](#)
- [Traction](#) : This treatment stretches your spine. A therapist does it by hand or uses weights. [More...](#)

What will happen to me?

If you have back pain, the good news is that you are likely to make a reasonably fast recovery.

- Most back pain lasts less than two weeks. ^[12]
- About 9 in 10 people are completely better in less than six weeks.
- About two-thirds of people have less than a week off work. ^[13]
- About 9 in 10 people are back to work within two months. ^[12]

But if you have back pain for more than three months, you may find it more difficult to recover. If you've taken time off work, you might find it more difficult to return. And, if you've been off work for more than two years, then you may have become seriously disabled. ^[14] Some people with chronic back pain may never return to work.

This is why doctors think it's important to prevent your back pain becoming long term (chronic). Researchers now think the best way to do this is to [stay active](#) because it means you are more likely to get back to work.

One study found that people with back pain tended to get better more quickly if they had positive expectations about recovering. ^[15] Of course, it may simply be that people who had less serious back problems to start with felt they were more likely to recover.

Getting depressed

Having constant back pain can make you feel depressed or irritable. You may feel tired, lose your appetite, and lose weight. ^[3] This may make it more difficult to get back to work or to your usual activities.

If your back pain is getting you down, talk to your doctor about it. Feeling depressed can affect how you respond to treatment and how soon you get back to your normal activities. Your doctor may be able to reassure you that nothing is seriously wrong and that the best thing you can do is to stay active. You can also get advice from your doctor about how to take care of your back.

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If you want to read more about how your illness might be affecting your mood, see our information on [Depression in adults](#) .

Back pain coming back

Once your back pain gets better, there is a chance that you'll get more bouts of backache. As many as 8 in 10 people who have had back pain will get it again within a year, although it may be less severe the second time around. ^[5]

Your job can also affect whether you get back pain again. You are most likely to get repeated bouts if you are a nurse, or if your job involves a lot of driving. ^[14] Drivers are at risk because sitting down all day can squeeze and damage the discs in the lower back and weaken supporting muscles. Nurses are at risk because their job involves a lot of bending as they move and lift their patients.

Questions to ask your doctor

If you've got back pain, you may want to talk to your doctor to find out more.

Here are some questions that you might want to ask:

- Do you know what's causing my back pain?
- Do I need to have any tests?
- What treatment do I need?
- What should I do if the treatment doesn't make me feel better?
- Do I need to stay in bed or rest?
- Can I carry on going to work?
- How long will it take for me to get better?
- What else can I do to make my back feel better?
- Are there any exercises that can make my back stronger?
- Are there any alternative or complementary therapies that might help?
- What can I do to avoid getting a backache again?
- Is it all right for me to drive?

Treatments:

Staying active for short-term back pain

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[How good is the research on staying active for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about staying active, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

Yes. If you have short-term (acute) back pain, staying active may be the last thing you want to do. But staying active works.



By staying active, you can reduce your pain and speed up your recovery.

By staying active (rather than lying or sitting down most of the day), you can reduce your pain, speed up your recovery and get back to your day-to-day life. But be careful if you have severe back pain, and don't do anything that makes the pain worse. If you have bad pain or pain that runs down your leg, then see your doctor before you try to exercise.

What is it?

Staying active usually means that, as much as you can, you keep doing all the physical things you used to do, including going to work. It means you should avoid sitting still for

Back pain

long periods of time. Your doctor or physiotherapist can give you advice and reassurance about staying active.

How can it help?

If your back pain is making you stay at home from work, staying active can reduce the amount of time off you need and help you get back to work.^[24] ^[25] After 12 months, 7 in 10 people who stayed active when they had back pain were back at work.^[25] Out of those who were not given advice to stay active, just over half were back at work after 12 months.

If you stay active, it's also less likely your back pain will become a long-term disability.^[24]

How does it work?

If you stay in bed for a couple of days, your joints can get stiff. This can make it harder and more painful to bend and stretch. If you stay in bed for longer, your muscles could get weaker and you could become less fit. Worse still, staying in bed for a long time can cause your bones to get thinner and weaker, and can even cause pressure sores and blood clots.

Staying active is thought to prevent your back from becoming stiff, and it maintains your muscle strength and your fitness.

Can it be harmful?

It's unlikely that staying active will do you any harm. But the studies we found didn't look at side effects. However, you should see your doctor before you try to exercise if you have bad pain or pain that runs down your leg

Here is some practical advice about how to stay active.

- If you have a short-term attack of back pain, it's best to avoid heavy lifting, bending or twisting your back, or sitting for long periods of time, until the pain gets better. They may increase the stress on your spine and make your back pain worse.
- Avoid doing anything that makes the pain feel a lot worse. Try to keep as mobile as possible, but don't overdo it.

How good is the research on staying active for short-term back pain?

There is reasonably good evidence that people who have short-term back pain do better if their doctor or physiotherapist gives them advice on how to stay active.

We found one summary of the research (called a systematic review). It compared being advised to stay active with getting no advice or having the standard treatment for back pain (painkillers plus being advised to rest).^[24] There were six studies in the summary

Back pain

that included nearly 2,000 people with back pain. People who stayed active needed less sick leave and were less likely to have long-term disability than those who were not given this advice.

A study done after the summary looked at 457 people with back pain.^[25] This too found that people who stayed active went back to work sooner than those who were told to rest. The table below shows how many people in each group were back at work three, six and 12 months after their back pain started.

	Advised to stay active	No advice
Back to work after three months	52%	36%
Back to work after six months	61%	45%
Back to work after 12 months	68%	56%

Nonsteroidal anti-inflammatory drugs (NSAIDs) for short-term back pain

In this section

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[How good is the research on NSAIDs for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about nonsteroidal anti-inflammatory drugs, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

Yes. If you've got back pain, then taking nonsteroidal anti-inflammatory drugs (NSAIDs) will probably reduce your pain.

NSAIDs seem to work as well as other [painkillers](#) such as paracetamol, and other drugs such as [muscle relaxants](#) .

What are they?

NSAIDs are painkillers. They also help reduce **inflammation** of soft tissues that may be causing the soreness in your back.

There are lots of different NSAIDs. Here are some examples of NSAIDs (with brand names) that may be used for back pain:

- diclofenac (Voltarol)
- ketoprofen (Oruvail, Orudis)
- nabumetone (Relifex)

Back pain

- naproxen (Naprosyn, Arthrofen).

You need a prescription for most of these drugs. But you can buy lower doses of ibuprofen (Nurofen) and diclofenac (Voltarol Pain-eze Tablets) over the counter at pharmacies and supermarkets.

COX-2 inhibitors

Some NSAIDs are called COX-2 inhibitors. These are newer NSAIDs that may cause less irritation to the stomach than the older ones. Researchers don't know for certain though. ^[26]

Examples of COX-2 inhibitors are celecoxib (brand name Celebrex) and etoricoxib (Arcoxia).

How can they help?

Taking a nonsteroidal anti-inflammatory drug will give you short-term relief from back pain. ^[27] ^[28]

If you are having problems moving around or exercising, NSAIDs may help you become more active again. In turn, this could help you to become physically fit, less stiff and more able to move around in the future. ^[27] If you take an NSAID, you may not need to take other painkillers. ^[27]

All NSAIDs seem to work as well as each other. ^[27] NSAIDs seem to work just as well as paracetamol, muscle relaxants and stronger painkilling drugs called opioids (such as codeine). ^[27]

How do they work?

NSAIDs can reduce the inflammation of soft tissues in your back that may be contributing to your back pain. They are also painkillers.

Can they be harmful?

NSAIDs can cause an upset stomach and give you stomach pain, sickness or diarrhoea. ^[16] Taking them with food may help to reduce this problem.

NSAIDs can also cause more serious stomach problems. They can irritate the lining of your stomach, which can increase your risk of a stomach ulcer or even bleeding inside your stomach. ^[16] The risk is bigger if you're older or if you're taking high doses of NSAIDs.

Talk to your doctor if you have a stomach ulcer, or if you've ever had one in the past. NSAIDs might not be suitable for you, so you'll need to take another type of painkiller instead.

Back pain

If you're taking NSAIDs regularly, there are drug treatments that can help protect your stomach. Ask your doctor about these.

There doesn't seem to be a difference between how well various NSAIDs work. Ibuprofen seems to have the fewest side effects, but this may be because doctors tend to prescribe it at lower doses than the other NSAIDs. ^[29]

Taking high doses of some NSAIDs every day for a long time may increase your risk of a heart attack or stroke. There's not likely to be a problem if you only have short-term back pain and aren't taking them for very long. But if you'd like to read more, see [Warnings about side effects of NSAIDs](#) .

How good is the research on NSAIDs for short-term back pain?

There has been a lot of good research about using nonsteroidal anti-inflammatory drugs (NSAIDs) to treat back pain.

For example, one large summary of the research looked at the results of many separate studies. ^[27]

In total, the trials in this review looked at more than 11,000 patients. ^[27]

Painkillers for short-term back pain

In this section

[Do they work?](#)

[What are they?](#)

[How can they help?](#)

[How do they work?](#)

[Can they be harmful?](#)

[How good is the research on painkillers for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about painkillers (sometimes called analgesics), a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

They're likely to help. But if you have short-term back pain, doctors often recommend that you try a [nonsteroidal anti-inflammatory drug \(NSAID\)](#) first, instead of any other type of painkiller. Ibuprofen is a well-known NSAID .

As well as helping with pain, NSAIDs also help with [inflammation](#) , so they might be more useful than other painkillers if you have back pain. However, some research suggests that paracetamol works just as well as NSAIDs.

What are they?

Painkillers (analgesics) are drugs that relieve pain. You can buy milder ones over the counter, but you'll need a prescription from your doctor to get stronger ones. There are different kinds of painkillers.

Back pain

Your doctor may recommend paracetamol or ibuprofen as the first treatment you try. You can buy these yourself from supermarkets or pharmacies.

If paracetamol doesn't work on its own, then your doctor may prescribe you paracetamol combined with a stronger painkiller called codeine (brand name Co-codamol). Adding codeine to paracetamol may reduce pain slightly better than paracetamol on its own, but you're more likely to get side effects from a combination of painkillers. ^[30]

Tramadol (brand names include Zamadol, Zydol, and Tramake) is another painkiller that might be used for back pain.

Codeine and tramadol belong to a group of drugs called **narcotic analgesics** (also called opioids). You need a prescription for most narcotic analgesics. However, you can buy paracetamol combined with a low dose of codeine from a pharmacist.

Narcotic analgesics come as tablets, liquids, suppositories (capsules that you put inside your bottom), and injections.

Usually, your doctor will recommend you only take strong painkillers for a few weeks. This is because you can become dependent on them. If you take a narcotic analgesic for a long time, your body gets used to it. When you stop taking it, you may get unpleasant side effects, called **withdrawal symptoms**.

Here are some examples of other narcotic analgesics (with brand names) that might be used to treat back pain:

- Dihydrocodeine (DF118), or dihydrocodeine combined with paracetamol (Co-dydramol)
- Dextropropoxyphene
- Hydromorphone (Palladone).

How can they help?

Painkillers may help relieve your symptoms if you have short-term back pain. ^[27]

Paracetamol and other painkillers may work just as well as NSAIDs. ^[27] But we need more research to be certain.

How do they work?

Painkillers reduce pain by stopping pain signals getting to your brain.

Can they be harmful?

Paracetamol is safe if you follow the directions on the package. If you take the right dose, it shouldn't irritate your stomach like some painkillers can. However, taking an overdose of paracetamol can damage your liver. This can be bad enough to kill you. If you think

Back pain

you have accidentally taken too much paracetamol, you should see your doctor or get to hospital immediately.

Stronger painkillers such as codeine can cause nausea, vomiting, drowsiness, and constipation. About half of all people taking painkillers become constipated or feel drowsy, or both. ^[30]

Taking several different painkillers together can make side effects worse, particularly if you mix drugs like codeine with other painkillers. ^[30]

If you take drugs like codeine (called opioids or opiates) regularly, you can become dependent on them. If you take them for a long time, your body gets used to the drug. When you stop taking it, you may get unpleasant side effects, called withdrawal symptoms. Also, if you keep on taking the drug, you may need higher and higher doses to get the same effect.

Very rarely, breastfeeding babies can get serious problems if their mother is taking codeine. ^[31] There isn't a problem for most mothers, but a small minority of women absorb codeine much faster than normal. This means more of the drug gets into their breast milk, which can cause side effects for the baby. If your baby is sick, reluctant to feed, or sleeps more than usual, stop taking codeine and see your doctor straight away. If you become very sleepy yourself, it's also a good idea to talk to your doctor.

How good is the research on painkillers for short-term back pain?

There is quite good evidence about using painkillers (analgesics) to relieve back pain.

We haven't found any good research comparing painkillers with a dummy treatment (a placebo) in people with short-term back pain. All the research we found compared the commonly used painkillers with each other, with [NSAIDs](#) , or with treatments that aren't drugs, such as ultrasound or [acupuncture](#) . ^[27] We found one good-quality summary of the research (called a [systematic review](#)) that looked at the results from several separate studies.

Spinal manipulation for short-term back pain

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[How good is the research on spinal manipulation for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about spinal manipulation, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Back pain

Does it work?

Probably. There's evidence that having your spine manipulated can help to reduce back pain if you've had it for a short time.

Manipulation has some risks. In rare cases, it can damage the nerves or blood vessels in your spine.

What is it?

Spinal manipulation is when a health professional uses their hands to move parts of your backbone (spine). It can be done by [chiropractors](#) , [osteopaths](#) , and some [physiotherapists](#) . The aim is to adjust the small joints between the bones (vertebrae) in your spine to relieve pain and stiffness.

The best-known technique is the high-velocity thrust. This is where a therapist uses short, sharp movements to push a joint slightly further than it would usually move. This can make a cracking sound. Chiropractors are more likely to press directly on the small bones (vertebrae) in your spine with their hands. And osteopaths may twist, push, or pull your limbs to make levered thrusts.

If you have spinal manipulation, it's important to go to someone who is properly trained and experienced in giving this treatment.

In the UK, all osteopaths, chiropractors, and NHS physiotherapists are registered. You may be referred to an NHS physiotherapist. If you are considering private treatment for spinal manipulation, ask your GP for advice about who to see.

How can it help?

We don't know if it helps. Different studies have shown different results.

One summary of the research (a [systematic review](#)) found people had less pain during the first six weeks, if they had spinal manipulation. ^[32] But another summary of the research found no difference between spinal manipulation and a dummy (placebo) treatment. ^[28] It's not clear whether the two reviews looked at the same studies.

A more recent study also found no difference between spinal manipulation and a placebo treatment. ^[33]

There doesn't seem to be much difference between how well manipulation works compared with some of the other treatments for back pain, such as [physiotherapy](#) , [exercises](#) , [back schools](#) , or being treated by your GP. ^[34]

How does it work?

We don't know exactly how manipulation might work. Chiropractors believe that some people have back pain because parts of their spine are slightly out of line (these

Back pain

misalignments are called **subluxations**). Manipulation is believed to realign any parts of your spine that are out of place.

It's also possible that manipulation might take pressure off nerves in your back, which could help with pain. Another explanation is that manipulation could help relax the muscles around your spine.

Can it be harmful?

About half the people who have spinal manipulation get minor side effects, such as discomfort, a headache, nausea or dizziness.^[35] Serious side effects seem to be rare, but there hasn't been enough good research to know exactly how often they happen.^[36]

However, another study points out that not all serious side effects of manipulation by a chiropractor get reported.^[37] So, although serious side effects appear to be rare, we don't know for certain how often they happen. There doesn't seem to be any way to predict who might be at risk of more serious problems. So, the author of the study suggests that you:

- Make sure you go to a qualified therapist
- Think about stopping treatment if you get any side effects at all, even if they're minor.

Some guidelines suggest that manipulation shouldn't be used for people who already have problems affecting their brain or nerves.^[38]

How good is the research on spinal manipulation for short-term back pain?

There is some evidence about using spinal manipulation to help people with back pain.

The studies we found only followed people for a few weeks after their treatment. This makes it difficult to say whether spinal manipulation works over a long time.

We found one summary of the research (called a **systematic review**) that looked at 29 studies of spinal manipulation in people with short-term back pain.^[39]

Muscle relaxants for short-term back pain

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[How do they work?](#)

[Can they be harmful?](#)

[How good is the research on muscle relaxants for short-term back pain?](#)

Back pain

This information is for people who have short-term back pain. It tells you about muscle relaxants, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

Yes, but there are drawbacks. Muscle relaxants, such as diazepam, can ease muscle tension and pain within a few hours. But they also cause side effects. Most people taking muscle relaxants get dizzy or drowsy. There is also a risk you could get **dependent** on these drugs, even if you take them for a short time.

All muscle relaxants seem to work equally well.

What are they?

Muscle relaxants are drugs that relax your muscles. These drugs also make you calm and sleepy (they are **sedatives**). Muscle relaxants are used for people in severe pain, but only for a short period.

Doctors quite often prescribe them to relieve spasms in back muscles that could be causing pain. A spasm is when a muscle suddenly tightens uncontrollably. This can be very painful.

The muscle relaxant that doctors usually prescribe for bad back pain is called diazepam. Other drugs (with brand names) include:

- baclofen (Lioresal)
- dantrolene (Dantrium)
- lorazepam (Ativan)
- tizanidine (Zanaflex).

How can they help?

If you have short-term back pain, muscle relaxants may help to: ^[40] ^[28]

- Reduce the tension in your back muscles
- Reduce the amount of pain you are in
- Allow you to move around more comfortably so you can get on with your day-to-day activities.

It probably doesn't matter which muscle relaxant you take. They all seem to work as well as each other in relieving pain. ^[40] ^[41] ^[42] ^[43] These drugs are usually given only when

Back pain

your back pain is at its most severe, and you will be advised to take them for only a short time. ^[42]

If your doctor suggests that you take a muscle relaxant for your back pain, you may want to discuss alternatives. For example, [nonsteroidal anti-inflammatory drugs](#) (NSAIDs) work as well as muscle relaxants, are less likely to have side effects, and their side effects are also less serious.

How do they work?

Doctors think that because these drugs relax muscles, they reduce any pain that might be caused by spasms or tension in the muscles of the back.

If your back hurts, you may try to avoid pain by being careful about how you move. This can cause extra tension in your back. Restricting your movements can make your back feel more uncomfortable, sore and stiff. Muscle relaxants should help because they generally make you feel more relaxed and less tense.

Can they be harmful?

These drugs can cause side effects. They can make you feel sick, dizzy, or drowsy. ^[40] This happened after just one week of treatment in up to 70 in 100 of the people in the studies we have looked at. You may not be able to drive if your treatment makes you drowsy.

Some muscle relaxants can cause unpleasant side effects when you stop taking them. These are called withdrawal symptoms. Baclofen, diazepam, and lorazepam can all cause this problem. Your doctor will help you cut down slowly when you stop taking them. ^[44]

Dantrolene and tizanidine can both damage your liver. ^[44] If you take them, you'll need tests to make sure your liver is still working properly. See your doctor if you get flu-like symptoms, feel sick, feel unusually tired, don't feel like eating, or get a yellow tinge to your skin or eyes. These could be a sign of liver problems.

Tizanidine reacts badly to other common medicines, including some antibiotics. Always tell your doctor about any other medicines you are taking. ^[45]

How good is the research on muscle relaxants for short-term back pain?

The research on muscle relaxants for people with short-term (acute) back pain is quite good. We found one summary of the research (called a [systematic reviews](#)) that compared the results of many studies. ^[40]

Acupuncture for short-term back pain

Back pain

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[Can it be harmful?](#)

[How good is the research on acupuncture for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about acupuncture, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't really know if acupuncture helps short-term (acute) back pain. There haven't been enough good-quality studies.

What is it?

Acupuncture is a traditional Chinese treatment. It's a type of complementary or alternative medicine. If you have acupuncture, a trained acupuncturist puts sterile needles into your skin.

Traditional acupuncturists believe that acupuncture improves the flow of energy around your body. Some modern doctors think that putting needles in the skin could encourage the release of natural chemicals that block pain and help you feel relaxed.^[46] Another theory is that acupuncture might work a bit like talking therapy. Discussing your situation with an acupuncturist and relaxing while the needles are put in might reduce anxiety, or help you cope better with pain.

You may have acupuncture alongside other treatments for back pain, such as [NSAIDs](#) , [exercise](#) , or [behavioural therapy](#) .

How can it help?

We don't know if acupuncture will relieve short-term back pain. There hasn't been any good research that looks at this.^[47]

How does it work?

It's not clear how acupuncture might work. One theory is that it stimulates the release of natural chemicals in your body that block pain. These chemicals are called endorphins and enkephalins.

Can it be harmful?

Acupuncture is safe, as long as you are treated by a trained acupuncturist.

There can be serious risks with acupuncture, including trauma, HIV infection, or hepatitis (a liver infection). These can happen if you get treated by an acupuncturist who hasn't been trained or who doesn't take good care of needles.^[48] Acupuncturists can use disposable needles to prevent from passing on infections.

How good is the research on acupuncture for short-term back pain?

We didn't find any good studies of acupuncture in people with short-term back pain. ^[49]

Back schools for short-term back pain

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[How good is the research on back schools for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about back schools, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

We're not sure. There is some research on back schools for people with short-term back pain, but the results don't say one way or another if the schools work.

What are they?

Back schools are classes where people are taught about back pain, usually over a few weeks. The number of classes and what you learn in them is different in each of the programmes. Generally, people learn about how their back works, what can go wrong with their backs, the best ways to stand and move to do less damage to their back, and how to safely take part in sport and exercise. The classes are taught by **physiotherapists** or doctors and may include exercises.

How can they help?

We don't know for sure if back schools can help. Back school might help you if you have short-term back pain. ^[50] But we need more studies to know for certain.

How do they work?

The theory is that teaching people how their backs work and what causes pain means that they can adapt their lives to reduce their pain and prevent future back problems. For example, people may be taught the best way to get out of bed and lift and carry things. This could mean that they avoid putting pressure on the part of the back that is causing them problems. It may also mean that they use their backs properly in the future.

Can they be harmful?

It is very unlikely that attending a back school will make your pain worse or cause any harm. However, the studies haven't looked at this specifically.

How good is the research on back schools for short-term back pain?

There hasn't been much good research to show that back schools are helpful for people with short-term back pain.

We found one summary of the research.^[50] It looked at the results of four small studies of people with short-term low back pain. But the studies had varying results so we don't know whether back schools are helpful.

Back supports for short-term back pain

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[How good is the research on back supports for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about back supports, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know whether wearing a back support, such as a corset or a wide belt, will relieve short-term (acute) back pain or prevent you from injuring your back in the first place. Some research has been done to discover whether back supports work, but there is not enough to know for certain.

What are they?

If you have back pain, some doctors and **physiotherapists** may recommend that you wear a support belt or corset to help stabilise your spine, keep it in line, and restrain you from making any awkward movements that could damage your back or make the pain worse.

Supports are sometimes recommended to prevent back pain in people who have jobs that involve a lot of bending and lifting, such as airline baggage handlers and grocery warehouse workers.

How can they help?

We don't know if wearing a support belt or corset will help reduce your pain or reduce your chances of injury. There hasn't been much research.

One small study suggests they may help people to keep active, and to feel less pain. But there are problems with the study that mean we can't rely on the results.^[51]

Back pain

Other research contradicts this study, suggesting that supports don't help with short-term back pain.^[52] It's also doubtful whether supports can stop pain from happening in the first place.

How do they work?

Wearing a tight-fitting belt or corset will squash your stomach muscles and make them tense up. This may cause the opposite muscles (those in your back) to relax because muscle groups work in pairs (like a pulley-and-lever system): as one set contracts, the other relaxes. Less stress on the back should cause less pain.

Can they be harmful?

The supports can rub against your skin and make it sore and cause stomach problems. Also, if you wear them for a long time, they may weaken your stomach and back muscles and raise your blood pressure. They're also hot and uncomfortable and may give people a false sense of security.^[53]

How good is the research on back supports for short-term back pain?

We found four studies looking at more than 1,000 people. These studies looked at people with both short- and long-term pain.^[52]

Behavioural therapy for short-term back pain

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[How good is the research on behavioural therapy for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about behavioural therapy, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. There's not enough evidence to say if behavioural therapy, a type of psychotherapy, can help for short-term back pain.

What is it?

Behavioural therapy is a talking treatment that's used for people who have suffered from different kinds of pain over a long period of time. You have regular sessions with a trained therapist by yourself or in a group, and you may meet every week. Behavioural therapy is based on the belief that the way you feel about your pain can make your pain better or worse.

Back pain

There are lots of different types of behavioural therapy and many different techniques that are used by therapists to help your pain. Some of these techniques include teaching you how to relax and helping you lower your level of stress.

How can it help?

We don't know if behavioural therapy can help. There's some evidence that it may reduce your pain. But there hasn't been enough good-quality research to say for sure. ^[54]

One study found no difference between having behavioural therapy plus exercise, compared to just doing exercise. ^[55] But the study was quite small and we need more evidence to be sure that it doesn't help.

How does it work?

When you have behavioural therapy you learn how the way you think and behave can affect how you feel, including how you feel pain, such as back pain. You can learn how you react to this pain. For example, it might make you feel angry, anxious, and depressed.

With the help of a therapist you can learn how to respond differently to back pain so that you relax and stay calm when you would usually feel the opposite. This might make you less angry and anxious about your back pain so that it starts to feel less of a burden, and you can manage your life better.

Can it be harmful?

We don't know. The only study we found didn't mention any harm to people from behavioural therapy. That doesn't mean that behavioural therapy is harmless, just that researchers didn't look for or report side effects.

How good is the research on behavioural therapy for short-term back pain?

We haven't found much good research into using behavioural therapy to treat short-term back pain.

We found one study (with 107 people) that looked at using behavioural therapy for short-term back pain. ^[54] But the study was poor quality, so we can't rely on the results. Another small study of 47 people found that behavioural therapy didn't make any difference, compared to exercise alone. ^[55]

Biofeedback for short-term back pain

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Back pain

This information is for people who have short-term back pain. It tells you about biofeedback, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. There hasn't been any good research to say whether or not this treatment works for people with any kind of back pain.

What is it?

Biofeedback is supposed to help you relax and reduce the tension, and therefore the pain, in your back muscles.

It is based on the idea that you can learn to control some of the things that your body normally does automatically, such as controlling the tension in your muscles.

Biofeedback is a technique designed to help people control the tension in their back muscles. To begin with, you wear a small electronic monitoring device that measures how tense your muscles are. It does this by recording the electrical activity in your muscles. You'll be taught how to relax (maybe through meditation) and to visualise what a relaxed muscle feels like. The electronic monitor will beep or flash if your muscles relax, and your brain will start to associate the practice of relaxation with reduced tension in your muscles.

Biofeedback may be used by behavioural **psychologists**. It can take quite a long time to learn biofeedback techniques, and they tend to be suggested as an option for people with long-term (chronic) back pain.

How can it help?

There haven't been any good studies showing that biofeedback helps back pain.

How does it work?

The theory is that you can train your brain to relax tense muscles. Generally, people feel better when they feel they are doing something for themselves to help their back pain.

Can it be harmful?

None of the studies we have looked at measured whether biofeedback can be harmful. But generally it's thought to be fairly safe.

How good is the research on biofeedback for short-term back pain?

The research on this treatment isn't very good and we haven't found any reliable studies in people with short-term back pain.

Epidural steroid injections for short-term back pain

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[How good is the research on epidural steroid injections for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about epidural steroid injections, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know. There hasn't been any good research on steroid injections for short-term back pain.

What are they?

Epidural steroid injections are used to reduce inflammation and pain in your back. Doctors inject a steroid (which reduces inflammation) into the area between the nerves of the spinal cord and the lining surrounding them (epidural space). You may have the injection with or without a local anaesthetic.

Epidural steroids are usually injected by anaesthetists or other medical specialists. It's unlikely that your GP will inject them.

The full name for these drugs is corticosteroids. They are not the same as the anabolic steroids sometimes used by body builders. Corticosteroids are similar to the chemicals made by your body to reduce inflammation (swelling).

How can they help?

We can't say for sure if epidural steroid injections will help back pain. There hasn't been any good research on this treatment. ^[56]

How do they work?

These drugs may numb the nerve roots and reduce any inflammation, but no one really knows how they work for back pain.

Can they be harmful?

All epidural injections have risks. For example, studies in people with some types of spine pain have found that epidural injections can cause infections. ^[57] It's important these injections are given by an experienced doctor. ^[58]

How good is the research on epidural steroid injections for short-term back pain?

We don't know if epidural steroid injections work. We found very few studies, and the studies we found had very few people in them. This means that we can't draw any firm conclusions. ^[56]

Exercise, including back exercises, for short-term back pain

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[How good is the research on exercise, including back exercises, for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about exercise, including back exercises, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know whether general exercise, or doing back exercises, can help with short-term back pain. We know that [staying active](#) is better than resting. But the research on exercises isn't good enough to tell us whether they work.

What is it?

This treatment is a structured exercise programme that you can do at home, or under supervision. The programmes can involve bending forwards and straightening your spine, stretching, and strengthening exercises (such as sit-ups). This treatment is usually only given to people with long-term (chronic) back pain.

Some exercise programmes have specific names. The most common are the Williams flexion programme and the McKenzie extension exercises. In the Williams programme, people with back pain do lots of forward bending (flexion) to strengthen the abdominal muscles and the back muscles responsible for moving the spine. The McKenzie exercises focus on straightening and extending the spine. ^[59] Two others, the Mensendieck and Cesar programmes, combine exercises with teaching. ^[60]

Another option is an aerobic exercise programme. This type of exercise combines activities such as walking and cycling. This gets your cardiovascular system going so that your heart is beating faster, your blood is flowing, and oxygen is circulating around your body. If you join a gym, make sure you discuss your back problems with trainers there. They will be able to recommend which exercises are best for you.

If your doctor or physiotherapist recommends an exercise programme, they will work with you to draw up a plan that explains the type of exercises you should do, as well as how many repetitions to do and how often to do them.

How can it help?

We know that staying active is a good idea for people with back pain. But overall, the research on exercise programmes doesn't tell us whether they work or not. ^[61] ^[62] ^[63] ^[64] ^[65]

How does it work?

The thinking behind exercise programmes is that the exercises will strengthen muscles that support your back, improve your flexibility, and increase your stamina. This will help you develop a stronger and less painful back.

Some research has found that people who have chronic back pain have back muscles that aren't in good condition (not very toned). This makes it difficult for the spine to support itself in an upright position. Strengthening the muscles helps to take this stress off the spine.

There is also the 'feel-good' factor that comes with exercising and achieving goals. Sometimes people with back pain feel depressed. This can make their pain even worse. Some studies suggest that exercise may help improve people's mood. This could give a positive boost and may help people to believe that they can manage to do more.

Can it be harmful?

Studies don't often show the possible harms of exercise programmes.

But a few people in the studies found that their back pain got worse or their backs felt sore after exercise. ^[61]

How good is the research on exercise, including back exercises, for short-term back pain?

For people with short-term back pain, it isn't clear whether bending, stretching, and strengthening exercises can help.

We found one summary of the research (a **systematic review**) that looked at several studies. ^[66] Some of the studies weren't done very well, and the results are inconsistent. So we can't be sure whether exercise programmes help or not for short-term back pain.

Massage for short-term back pain

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[How good is the research on massage for short-term back pain?](#)

Back pain

This information is for people who have short-term back pain. It tells you about massage, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We're not sure. We don't know whether massage can help people with short-term back pain. There isn't enough research to know for certain.

What is it?

A massage therapist or physiotherapist uses their hands to knead, rub, roll, stroke, and manipulate the soft areas over your lower back. They may also massage other parts of your body, or your whole body.

Massage therapists do not manipulate bones or joints. Massage is a gentle treatment, but some types of massage are more intensive than others. Massage is designed to relax your mind as well as your body, and ease tension in your muscles.

You may have a single session, or short sessions once a day or once a week. Massage treatment can go on as long as you need it. Most studies tested massage treatments given two or three times a week for several weeks.

How can it help?

It's not clear how helpful massage is for people with short-term back pain. Some studies show it helps improve pain in the short term (one week), but we don't know how long the effects last.^[67] We also don't know whether it helps people keep active, or whether it works better than other treatments such as exercise.

How does it work?

If you bang your head or your knee on a cupboard door, you naturally rub it to ease the pain. Massage is an extension of this natural reaction. Massaging soft tissue (skin, fat, and muscle) helps ease pain by relaxing you physically and mentally. It also helps your body to release endorphins, which are your body's natural painkillers.

Massage can also be a kind of 'distraction treatment'. The nerves connecting your back to your brain are so busy transmitting signals from the massage that they stop transmitting pain signals from your sore back.^[68]

Can it be harmful?

Massage is likely to be safe. But you shouldn't have massage treatment over skin that is inflamed or infected.^[68]

How good is the research on massage for short-term back pain?

We haven't found much good research on massage for short-term back pain. One summary of the evidence (a [systematic review](#)) found two good-quality studies, each including 60 people. ^[69] We need to see bigger, better-quality studies on massage.

Multidisciplinary treatment programmes for short-term back pain

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[How good is the research on multidisciplinary treatment programmes for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about multidisciplinary treatment programmes, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know. The research on intensive treatment programmes isn't very good. It's hard to say whether or not they work for short-term back pain.

What are they?

During a multidisciplinary treatment programme, you see a team of experts. Some of them treat your pain, while others help you cope better with things like depression, which may be making your pain worse.

The health professionals in the team can vary in different programmes, but you may see a doctor, a [physiotherapist](#), a [psychologist](#), a social worker, and an occupational therapist. Intensive treatment programmes seem to work best if you get some kind of treatment every day.

You may be admitted to hospital to have your treatment. But usually you will see different therapists at a clinic. ^[70] You'll probably be taught some exercises to do at home. The following treatments have been included in programmes: ^[70]

- Education about your back
- Exercises for your back
- Cognitive behavioural therapy (CBT). This is a type of talking treatment where you talk to a therapist about how your back pain affects you. You try to work out ways of coping better with your back pain

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- Treatment with hot and cold packs
- Transcutaneous electrical nerve stimulation (TENS). A small battery-operated device (TENS unit) is worn around your waist. It delivers continuous pulses of electricity to help relieve pain
- Massage
- Relaxation exercises
- Hydrotherapy (water massage).

Ask your doctor about what's available in your area.

How can they help?

One study looked at people who'd had back pain for between one and three months. An intensive treatment programme from a team of health professionals helped people get back to work after 10 weeks.^[71] People who had the usual treatments from their doctor took 15 weeks to get back to work. However, this study wasn't very good quality. So, we can't say for sure whether intensive treatment programmes work for short term pain.

How do they work?

Back pain is different for everybody. And a treatment that works for one person may not work for another.

If you're treated by a multidisciplinary team you'll be treated with a variety of approaches. This means there's a better chance that you will get a treatment that works for you.

For example, physiotherapy may work for you, or massage, or behavioural therapy. But these treatments may not help someone else with back pain. But if they can do relaxation and have education about back pain as well, these treatments might work for them.

Can they be harmful?

It seems unlikely that taking part in a multidisciplinary programme will do you any harm. The research we found didn't report on side effects from this treatment.

How good is the research on multidisciplinary treatment programmes for short-term back pain?

We haven't found much research testing this treatment in people with short-term back pain.

We found one summary of the research (called a **systematic review**).^[71] It compared the results of two studies including a total of 233 people. People in these studies had

been having back pain for one month to three months. Doctors call this subacute back pain.

Temperature treatments for short-term back pain

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[How good is the research on temperature treatments for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about temperature treatments, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know. There isn't any good research on whether these treatments work for people with short-term (acute) back pain. We need more research on them.

What are they?

Temperature treatments gently heat up or cool down the part of your body that hurts. These treatments are meant to be soothing, distracting, or healing.

Some people use ice packs or apply heat (using heat lamps or hot water bottles) to their backs.

Ultrasound therapy uses soundwaves that are pitched so high you can't hear them. Different parts of your body soak up these waves at different rates. They pass easily through the surface of your body to heat up the aching joints or muscles underneath.

How can they help?

There's not much research looking at whether temperature treatments, such as heat, ice, or ultrasound, will help reduce back pain or speed up your recovery.

A few studies suggest heat wraps might be helpful in the short term. ^[72] ^[73]

How do they work?

Ice packs or heat are used to try to reduce any swelling, or **inflammation**, that may be causing you back pain.

Ultrasound therapy may warm up deep muscles and joints in the back and relieve tension and pain.

Can they be harmful?

The risk of side effects from temperature treatments is thought to be low, although not many studies have looked at possible side effects.

How good is the research on temperature treatments for short-term back pain?

We haven't found many good research studies that look at whether temperature treatments will help your back pain. A few studies suggest heat wraps might be helpful in the short term. ^[72] ^[73]

Traction for short-term back pain

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[How good is the research on traction for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about traction, a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

Maybe. Traction might help you if you have short-term (acute) back pain, but we need more research before we know for certain.

What is it?

If you are put in traction, you'll lie in bed and your spine will be gently stretched by weights. The traction can be done by hand by a [physiotherapist](#) or by a machine that uses a motor to move the weights.

How can it help?

We don't know if traction can help. There hasn't been enough good research to say.

How does it work?

The idea is that stretching your back will create space between the small bones (vertebrae) that make up your spine. The theory is that this will relieve the pressure on the discs that fit between these bones, release any trapped nerves, and relieve tension in your muscles. Doctors think that the force needed to stretch your spine enough for the treatment to help must be more than a quarter of your weight.

Some doctors and physiotherapists have pointed out that if your pain is caused by a torn muscle, a pulled ligament, or a leaking disc, then stretching your back won't ease the

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pain. The problem with back pain is that it's often difficult to work out what's causing the pain.

Can it be harmful?

Traction can weaken your body. Lying in bed can make your muscles lose their tone and get flabby and weak. It can also weaken your bones because you're not walking around. Traction may also lead to a serious condition called thrombophlebitis (inflammation related to blood clots in your veins).^[74]

How good is the research on traction for short-term back pain?

There is little good-quality evidence for traction for short-term back pain. We could not find any good studies of people with low back pain without sciatica.^{[75] [54] [76] [77]}

Transcutaneous electrical nerve stimulation (TENS) for short-term back pain

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[How good is the research on TENS for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about transcutaneous electrical nerve stimulation (TENS), a treatment used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. It may help relieve pain, but there hasn't been any research into TENS for people with short-term (acute) back pain.

What is it?

A TENS unit is a small battery-operated device, about the size of a pack of cards, that is fixed onto a belt.

From this device, small wires are connected to jelly-coated pads. You stick these pads onto your skin where you feel the most pain.

When you switch the device on, small pulses of electricity stimulate the nerves in your spine. This may feel prickly. The idea is that this blocks pain messages to your brain.

How can it help?

We don't know whether it can. We didn't find much research on using TENS for short-term back pain. The research we found showed that TENS was no better than a dummy (placebo) treatment. ^[28]

How does it work?

Doctors think TENS units may help your pain by stimulating the nerves in your back with a small electrical current. While these nerves are being 'tickled' by the electrical current, they are less able to carry the feelings of pain from your back up to your brain. The theory is that you feel less pain in your back because your nerves are 'concentrating' on something else.

An example of this idea is if you rub your hand after hurting it, the nerves in your hand just feel the rubbing rather than the pain. However, there's no evidence to show this works for back pain.

Can it be harmful?

The risks of TENS are probably low, but the studies we found didn't give any information on risks.

How good is the research on TENS for short-term back pain?

We found one summary of the research, which looked at two studies of TENS in 121 people with short-term back pain. ^[28]

Bed rest for short-term back pain

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[How good is the research on bed rest for short-term back pain?](#)

This information is for people who have short-term back pain. It tells you about bed rest, a treatment sometimes used for short-term back pain. It is based on the best and most up-to-date research.

Does it work?

No. The traditional advice to 'rest in bed for a couple of days' may be exactly what you feel like doing. But it's probably not going to help if you have short-term (acute) back pain. In fact, your pain might actually get worse, and you may feel stiff once you do get up. Taking to your bed, even for a couple of days, might be as bad for you as staying there for a whole week.

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Trying to keep up with your normal activities is unlikely to cause you more pain, and it could mean that you will get back to normal a little faster. It's also less likely that you will have the problem again.

What is it?

Bed rest is just that: staying in bed for a couple of days or longer.

How can it help?

If you have short-term back pain, spending a couple of days in bed is unlikely to help, even though this may be exactly what you feel like doing.^[78] It won't help relieve your pain or make it any easier to move around once you do get up.

How does it work?

There is a logical reason why some doctors still recommend staying in bed for a couple of days to help with your back pain. It's assumed that, when you lie down, the small of your back doesn't have to support the weight of your upper body. Therefore, there will be less pressure on damaged discs or nerves, and so there will be less pain. Also, any tense or strained muscles will be given the chance to rest. In reality though, lying down still doesn't seem to help.

Can it be harmful?

If you stay in bed for a couple of days, your joints can get stiff. This can make it harder and more painful to bend and stretch. If you stay in bed for longer, there is a chance that your muscles may weaken and you could become less physically fit. Worse still, staying in bed for a long time can cause your bones to get thinner and weaker, and it can even cause pressure sores (**ulcers** you can get if you stay in bed too long) and **blood clots**^[24].

How good is the research on bed rest for short-term back pain?

There is good evidence to show that bed rest will not ease back pain.

We found a large review that summarised the results of individual studies with people who had short-term back pain.^[79]

Exercise, including back exercises, for long-term back pain

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[How good is the research on exercises, including back exercise, for long-term back pain?](#)

Back pain

This information is for people who have long-term back pain. It tells you about exercise, including back exercises, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

Yes. An exercise programme can help reduce long-term (chronic) back pain and help you get on with your normal activities.

What is it?

If you have long-term back pain, your doctor or physiotherapist may recommend a structured exercise programme that you can do at home, or under supervision. The programmes can involve bending forward and straightening your spine, stretching, and strengthening exercises (such as sit-ups).

Some exercise programmes have specific names. The most common are the Williams flexion programme and the McKenzie extension exercises. In the Williams programme, people with back pain do lots of forward bending (flexion) to strengthen the abdominal muscles and the back muscles responsible for moving the spine. The McKenzie exercises focus on straightening and extending the spine. Two others, the Mensendieck and Cesar programmes, combine exercises with teaching.^[80]

Another option is an aerobic exercise programme. This type of exercise combines activities such as walking and cycling. It gets your cardiovascular system going so that your heart is beating faster, your blood is flowing, and oxygen is circulating around your body. If you join a gym, make sure you discuss your back problems with trainers there. They will be able to recommend which exercises are best for you.

If your doctor or physiotherapist recommends an exercise programme, they will work with you to draw up a plan that explains the type of exercises you should do, as well as how many repetitions to do and how often to do them.

How can it help?

If you've had back pain for more than three months, exercise programmes can help you:^[80]

- Feel less pain
- Move around and get on with your normal activities.

The studies lasted six months. The benefits of exercise seemed to last throughout the six months.^[80]

Exercise works at least as well as any other usual treatment you might get from your doctor, such as [painkillers](#).^[80]

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Some research has looked at specific exercises, such as yoga, the Alexander technique, or McKenzie exercises.^{[63] [81] [82]} There's some evidence that all these treatments can help. Some studies show that yoga or McKenzie exercises might be slightly better than other forms of exercise, but we can't be sure about this.^{[63] [81]}

Some studies have suggested that doing exercises in water may help with back pain, but overall the research says that water exercises don't seem to be any better than exercises on dry land.^{[83] [84]}

How does it work?

The thinking behind exercise programmes is that the exercises will strengthen muscles that support your back, improve your flexibility, and increase your stamina. This will help you develop a stronger and less painful back. It also seems that they prevent symptoms from getting worse, which often happens when people are less active.

Some research has found that people who have long-term back pain have back muscles that aren't very toned. This makes it difficult for the spine to support itself in an upright position. Strengthening the muscles helps to take this stress off the spine.

There is also the 'feel-good' factor that comes with exercising and achieving goals. Sometimes people with long-term back pain feel depressed. This can make their pain even worse. Some studies suggest that exercise may help improve people's mood. This could give a positive boost and may help people to believe that they can manage to do more. Many studies measure how people feel about their pain and their ability to move around.

Can it be harmful?

Studies don't often show the possible harms of exercise programmes.

But a few people in the studies found that their back pain got worse or their backs felt sore after exercise.^[80]

How good is the research on exercises, including back exercise, for long-term back pain?

There's quite a lot of good-quality evidence on using exercise programmes to treat long-term back pain.

We found one big summary of the research (a **systematic review**) on exercise programmes for long-term back pain.^[85] It looked at 43 studies, with nearly 4,000 people in total.

But there were some problems with the research studies.

- They looked at different types of back exercises. We don't know which ones work best.^{[63] [81]}

Back pain

- Some of the studies were small, and some had problems with the way they were carried out. Only six studies were really good quality.

Intradiscal electrothermal therapy (IDETT) for long-term back pain

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[How good is the research on intradiscal electrothermal therapy \(IDETT\) for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about intradiscal electrothermal therapy (IDETT), a treatment for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. There hasn't been enough research yet to know whether intradiscal electrothermal therapy (IDETT) helps people with long-term back pain.

What is it?

Intradiscal electrothermal therapy (or IDETT for short) uses a heated probe to try to reduce pain from a damaged disc in your back.

Your back is made up of a column of bones, stacked on top of each other. There are discs of spongy tissue between each bone. These discs act like shock absorbers. They allow your back to be flexible, and they cushion the bones in your spine and stop them being damaged when you move.

Damaged discs can cause back pain. IDETT uses heat to try to reduce the pain from a damaged disc. IDETT is only suitable for people whose pain comes from a disc (although it isn't used to treat a [slipped disc](#)).

You'll need tests to find out whether your back pain comes from a damaged disc. One test involves having **X-rays** taken while fluid is injected. The fluid puts pressure on the disc, which triggers pain if the disc is damaged. You may also have an MRI scan.

During IDETT, you'll lie on your front under an X-ray machine. Using the X-ray for guidance, the doctor will put a hollow needle into your back. You'll be given an injection of local **anaesthetic** to numb the area, so you shouldn't feel any pain.

A thin metal probe is then threaded through the needle, towards the painful disc. The probe is then heated. The heat helps to shrink the disc and destroy nearby pain receptors.

You should be able to go home the same day you have this procedure.

How can it help?

There isn't enough research yet to know whether IDETT helps people with long-term low back pain.^[86] The studies that have been done have conflicting results.

One study looked at 64 people with long-term low back pain.^[87] People who had IDETT had less pain and could do more of their everyday tasks. People rated their pain as 2 points lower on a scale of 1 to 10. This compared with a 1 point reduction for people who had a dummy comparison treatment (a placebo). However, the study looked at a carefully selected group of people, so it's hard to say whether IDETT would work for a typical patient.

A second study looked at 57 people. It found that IDETT was no better than a placebo treatment.^[88]

How does it work?

There are several theories about how IDETT might help with back pain.^[89] The heat can help to shrink a damaged disc, which could change how the bones of your spine move and fit together. The heat may also destroy pain receptors, stopping them from sending pain signals to your brain. It's also possible that the heat stimulates the body's own healing response, or somehow helps to reduce inflammation.

So far, all these ideas are just theories. There isn't enough research yet to know whether or not IDETT really works.

Can it be harmful?

Some people get short-term side effects after IDETT, including pain, pins and needles, and numbness.^[86] In studies, up to 15 in 100 people got side effects.

Some people got more serious problems, although these aren't common. These problems included:^[86]

- Fluid leaking from around the spinal cord
- Compression of nerves, which can cause pain, strange sensations, problems moving your legs, and problems with your bladder and bowels (this is called cauda equina syndrome)
- Damage to the blood supply to bones in your back, causing them to die and collapse (this is called vertebral osteonecrosis).

How good is the research on intradiscal electrothermal therapy (IDETT) for long-term back pain?

The research on intradiscal electrothermal therapy (IDETT) for long-term low back pain isn't very good. Different studies have conflicting results.^[86] One study looked at carefully selected people, so we don't know if a typical patient would get the same results. We need more research to find out whether or not this treatment works.

Spinal fusion surgery for long-term back pain

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[How good is the research on spinal fusion surgery for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about spinal fusion surgery, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

Yes. People who have fusion surgery to join two bones in their back have less pain and can do more of their usual activities. Fusion surgery also helps people get back to work sooner.

What is it?

Your back is made up of a column of bones, stacked on top of each other. These bones are called vertebrae (each individual one is called a vertebra). Fusion surgery aims to make your spine more stable by joining two or more vertebrae together.

You may hear spinal fusion surgery called **spondylodesis** or **spondylosyndesis**.

Spinal fusion surgery is most suitable for people who have damage to their spine, such as damage to the discs between vertebrae, a fractured vertebra, or a narrow section of bone that puts pressure on your spinal cord (the bundle of nerves inside your spine). You'll need an **MRI scan** before surgery to make sure the operation is suitable for you.

During the operation, a surgeon uses a graft to join two or more bones in your spine. The graft can come from your own body (usually your hip) or from a donor. Sometimes, artificial materials are used instead. The graft is held in place by metal screws, rods, or plates.

The operation is often done through a cut in your back, but can also be done through a cut in your tummy or side.

You'll need to spend a few days in hospital after surgery. It will take several months before you can get back to your normal lifestyle. That's because it takes time for the

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fused bones to heal and join together properly. It's like waiting for a broken bone to heal. You'll need X-rays to check that the bones are healing. It will normally take about six weeks for the healing process to get underway, and up to one year for the bones to heal fully.^[90]

In the UK, fusion surgery is only recommended if other treatments haven't worked.^[91] Guidelines from the National Institute for Health and Care Excellence (NICE) say that people should try a combination of physiotherapy and psychological therapy before considering surgery. If you've tried these treatments and still have severe back pain, your doctor might suggest considering fusion surgery.

How can it help?

Compared with people who don't have surgery, people who have spinal fusion have less pain, can do more of their everyday activities, and can go back to work sooner.^[92]

In one study, two years after surgery people rated their pain as having dropped by 21 points on a scale from 1 to 100.^[93] People who didn't have surgery rated their drop in pain at just 4 points.

In the same study, 36 in 100 people who'd had surgery were back at work after two years, compared with 15 in 100 people who didn't have surgery.^[93]

However, it's not clear whether spinal fusion surgery is better than an intensive rehabilitation programme that includes physiotherapy and psychological therapy.^[92]

How does it work?

The aim of spinal fusion surgery is to make your spine more stable by joining together damaged bones in your back. Damaged bones can press on nearby nerves or muscles and cause pain. Spinal fusion surgery helps to stop this happening.

Can it be harmful?

All surgery has risks. In studies, between 1 in 10 and 4 in 10 people got complications from spinal fusion surgery, depending on the exact technique used.^[93] Make sure you talk to your surgeon and get a good idea of the potential problems before you decide to have surgery.

It's normal to have some pain after surgery. Don't suffer in silence. The doctors or nurses treating you will be able to give you painkillers.

Some people get more serious complications after spinal fusion surgery. In trials, these problems included:^[93]

- An infection deep in the wound where the surgery was done
- Major bleeding during surgery

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- A **blood clot**
- Severe breathing problems caused by fluid in the lungs (this is called acute respiratory distress syndrome)
- Heart failure.

Sometimes, the bones in the spine fail to fuse together as they heal. If this happens, you may need another operation.

How good is the research on spinal fusion surgery for long-term back pain?

We found several good-quality reviews of the research on spinal fusion surgery. One recent review compared spinal fusion surgery with non-surgical treatments. ^[92]

Other studies have compared spinal fusion surgery with intensive rehabilitation programmes. ^[92] These included **physiotherapy** and psychological therapy.

Artificial disc replacement surgery for long-term back pain

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[How good is the research on artificial disc replacement surgery for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about surgery to replace a damaged disc with an artificial one. It is based on the best and most up-to-date research.

Does it work?

We don't know. There isn't any good research to tell us if an artificial disc helps with long-term low back pain.

What is it?

Disc replacement surgery replaces a damaged disc in your back with an artificial one.

Your back is made up of a column of bones, stacked on top of each other. There are discs of spongy tissue between each bone. These discs act like shock absorbers. They allow your back to be flexible, and they cushion the bones in your spine and stop them being damaged when you move.

Damaged discs can cause back pain. If you have a damaged disc, one option is surgery to replace the disc with an artificial one.

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Artificial discs are designed to act like your own discs. They are usually made of soft plastic between two metal plates. Doctors normally fit the artificial disc into your spine through a small cut near your belly button. It is a form of keyhole surgery, carried out through a small opening, which usually results in a faster recovery than conventional surgery.

To read more about disc problems, see our information on a [Slipped disc](#) .

How can it help?

There hasn't been much good research looking at artificial discs for long-term low back pain. So, we can't say for certain whether or not this operation is likely to help you.

Three studies have compared artificial discs with [spinal fusion surgery](#) , an operation that seems to help with long-term back pain. ^[94] ^[95] ^[96] The studies didn't find any difference between the two types of surgery.

How does it work?

A damaged disc can cause back pain. For example, the damaged part of a disc might press on the nerves coming out of the spinal cord. If it does, it causes pain and muscle weakness. It can also cause [inflammation](#) in your spine.

Replacing a damaged disc with an artificial one aims to stop the pain. It also allows your spine to move in much the same way as before your operation. This is an advantage over [fusion surgery](#) , which joins several bones in your spine together.

Can it be harmful?

Any operation has a risk of problems. Make sure you talk to your surgeon and get a good idea of any potential problems before you decide to have surgery.

It's normal to have some pain after surgery. Don't suffer in silence. The doctors or nurses treating you will be able to give you painkillers.

Other possible problems after surgery to put in an artificial disc include: ^[97]

- An [infection](#)
- Injury to nerves or blood vessels
- The artificial disc breaking or moving out of place.

There hasn't been much research looking at how safe artificial discs are in the long term. ^[94] ^[95] ^[96]

How good is the research on artificial disc replacement surgery for long-term back pain?

We haven't found much good research looking at artificial discs for long-term back pain.

Several studies have compared artificial discs with [spinal fusion surgery](#) . ^[94] ^[95] ^[96]

Radiofrequency denervation for long-term back pain

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[How good is the research on radiofrequency denervation for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about radiofrequency denervation, a treatment used for back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. Some studies found short-term benefits, but others found that radiofrequency denervation didn't help people with long-term low back pain.

What is it?

Radiofrequency denervation uses a heated probe to deactivate the nerves around a painful part of your spine.

The bones in your spine have joints between them that allow you to bend and flex. Spongy discs between the individual bones help with movement and stop the bones rubbing against each other as you move. Nerves carry messages from the joints in your spine up to your brain.

If you're getting back pain because of a damaged joint or disc in your spine, radiofrequency denervation can be used to deactivate the nerves that carry the pain signals to your brain.

The procedure usually takes around 45 minutes. You'll lie on your front under an X-ray machine. Using the X-ray for guidance, the doctor will put a hollow needle into your back. You'll be given an injection of local anaesthetic to numb the area, so you shouldn't feel any pain.

A thin metal probe is then threaded through the needle towards the joint that's causing your pain. The probe is heated to destroy the nerves around the joint.

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How can it help?

We don't know whether radiofrequency denervation can help people with long-term low back pain. There have been several studies, but some are small and not very reliable, and the results are conflicting. ^[86]

One study found a short-term improvement with radiofrequency denervation. ^[98] Two months after treatment, people rated their pain 2 points lower on a scale of 1 to 10. However, another study found no benefit from radiofrequency denervation. ^[99]

One small study found that radiofrequency denervation worked better than [anaesthetic injections](#) into the spine.

How does it work?

Nerves carry signals around your body, including pain signals. Radiofrequency denervation uses a heated probe to deactivate the nerves around a painful part of your spine. So, you should feel less pain after treatment.

Nerves do heal, although it's a slow process. Most studies of radiofrequency denervation have been short term. We need more research to know if radiofrequency denervation really works, and to find out how long any benefits last.

Can it be harmful?

You might have some pain after radiofrequency denervation. In one study, one person felt one of their legs was slightly weaker after treatment, although this went away after a while. ^[86]

How good is the research on radiofrequency denervation for long-term back pain?

The research on radiofrequency denervation for long-term back pain hasn't given us clear answers so far. ^[86] Some studies have been of poor quality, which means we can't read much into them.

Multidisciplinary treatment programmes for long-term back pain

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[How good is the research on multidisciplinary treatment programmes for long-term back pain?](#)

Back pain

This information is for people who have long-term back pain. It tells you about multidisciplinary treatment programmes, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

Probably. Taking part in an intensive programme of treatment may help your long-term (chronic) back pain.

What are they?

During a multidisciplinary treatment programme, you see a team of experts. Some of them treat your pain, while others help you cope better with things like depression, which may be making your pain worse.

The health professionals in the team can vary in different programmes, but you may see a doctor, a **physiotherapist**, a **psychologist**, a social worker, and an occupational therapist. Intensive treatment programmes seem to work best if you get some kind of treatment every day.

You may be admitted to hospital to have your treatment. But usually you will see different therapists at a clinic.^[70] You'll probably be taught some exercises to do at home. The following treatments have been included in programmes.^[70]

- Education about your back
- Exercises for your back
- Cognitive behavioural therapy (CBT). This is a type of talking therapy where you talk to a therapist about how your back pain affects you. You try to work out ways of coping better with your back pain
- Treatment with hot and cold packs
- Transcutaneous electrical nerve stimulation (TENS). A small battery-operated device (TENS unit) is worn around the waist. It delivers continuous pulses of electricity to help relieve pain
- Massage
- Relaxation exercises
- Hydrotherapy (water massage).

Ask your doctor about what's available in your area.

How can they help?

If you've had back pain for more than three months, an intensive programme including a range of different treatments can reduce your pain and help you get on with everyday life. ^[70]

But you may need a lot of treatment to feel the benefit. In the studies we looked at, the people who were helped by an intensive programme had more than 100 hours of treatment.

We found one **review** of the research showing that intensive treatment programmes helped people get back to work sooner. ^[100] However, this review also found several studies showing that intensive programmes didn't make much difference to pain, and just one study that found they do reduce pain.

One study found that physiotherapy worked just as well as an intensive treatment programme. ^[101]

How do they work?

Back pain is different for everybody. And a treatment that works for one person may not work for another.

If you're treated by a multidisciplinary team you'll be treated with a variety of approaches. This means there's a better chance that you will get a treatment that works for you.

For example, physiotherapy may work for you, or massage, or behavioural therapy. But these treatments may not help someone else with back pain. But if they can do relaxation and have education about back pain as well, these treatments might work for them.

Can they be harmful?

It seems unlikely that taking part in a multidisciplinary programme will do you any harm. The research we found didn't report on side effects from this treatment.

How good is the research on multidisciplinary treatment programmes for long-term back pain?

There's quite a lot of good evidence on using multidisciplinary treatment for long-term back pain.

We looked at 10 studies that included 1,964 people in total. The studies compared intensive multidisciplinary programmes with other kinds of programme or with more traditional treatment. Researchers measured the amount of pain people reported, how easily they could move around, and how quickly they felt up to going back to work. ^[70]

One review of the research looked at intensive treatment programmes. ^[100]

Painkillers for long-term back pain

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[How good is the research on painkillers for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about painkillers (also called analgesics), a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

If you have back pain, your doctor may recommend an over-the-counter painkiller (analgesic) such as paracetamol. We know painkillers help to reduce pain. However, there hasn't been much good research looking specifically at how well paracetamol works for long-term back pain. There's been more research on stronger painkillers, which do seem to help.

What are they?

Paracetamol is a commonly used painkiller. Your doctors may recommend you try it first to treat your back pain. You can buy paracetamol yourself from a pharmacy or supermarket.

If paracetamol doesn't work on its own, then your doctor may prescribe you paracetamol combined with a stronger painkiller called codeine (brand name Co-codamol). Adding codeine to paracetamol may reduce pain slightly better than paracetamol on its own, but you're more likely to get side effects from a combination of painkillers. ^[30]

Tramadol (brand names Zamadol, Zydol, Tramake) is another painkiller that might be used for back pain.

Codeine and tramadol belong to a group of drugs called narcotic analgesics (also called opioids). You need a prescription for most narcotic analgesics. However, you can buy paracetamol combined with a low dose of codeine from a pharmacist.

Narcotic analgesics come as tablets, liquids, suppositories (capsules that you put inside your bottom), and injections.

Usually, your doctor will only recommend that you take these drugs for a few weeks. This is because you can become dependent on them. If you take a narcotic analgesic for longer, your body gets used to it. When you stop taking it, you may get unpleasant side effects, called **withdrawal symptoms**.

Here are some examples of other narcotic analgesics (with brand names) that might be used to treat back pain:

Back pain

- Dihydrocodeine (DF118), or dihydrocodeine combined with paracetamol (Co-dydramol)
- Dextropropoxyphene
- Hydromorphone (Palladone).

[Nonsteroidal anti-inflammatory drugs](#) (NSAIDs) are another type of painkiller that doctors often recommend for back pain. Ibuprofen is a well-known NSAID.

How can they help?

We know that paracetamol helps with pain. But there haven't been any good-quality studies looking at how well it works for long-term back pain. ^[102] ^[103]

Studies on opioid painkillers haven't clearly shown that they help. ^[104] But overall, the research on these drugs isn't very good quality, so it's hard to say whether they help with long-term back pain or not. One study of an opioid called tramadol found that it reduced pain and helped people get back to their usual activities. ^[105]

How do they work?

Painkillers reduce pain by stopping pain signals getting to your brain.

Can they be harmful?

Paracetamol is safe if you follow the directions on the package. If you take the right dose, it shouldn't irritate your stomach like some painkillers can. However, taking an overdose of paracetamol can damage your liver. This can be bad enough to kill you. If you think you have accidentally taken too much paracetamol, you should see your doctor or get to hospital immediately.

Stronger painkillers such as codeine can cause nausea, vomiting, drowsiness, and constipation. About half of all people taking painkillers become constipated or feel drowsy, or both. ^[30]

Taking several different painkillers together can make side effects worse, particularly if you mix drugs like codeine with other painkillers. ^[30]

If you take drugs like codeine (called opioids or opiates) regularly, you can become dependent on them. If you take them for a long time, your body gets used to the drug. When you stop taking it, you may get unpleasant side effects, called withdrawal symptoms. If you keep on taking the drug, you may need higher and higher doses to get the same effect.

Very rarely, breastfeeding babies can get serious problems if their mother is taking codeine. ^[31] There isn't a problem for most mothers, but a small minority of women absorb

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codeine much faster than normal. This means more of the drug gets into their breast milk, which can cause side effects for the baby. If your baby is sick, reluctant to feed, or sleeps more than usual, stop taking codeine and see your doctor straight away. If you become very sleepy yourself, it's also a good idea to talk to your doctor.

How good is the research on painkillers for long-term back pain?

There's some good research on a strong painkiller called tramadol.^[105] ^[106] There's less research on simple painkillers like paracetamol.

Back schools for long-term back pain

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[How good is the research on back schools for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about back schools, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know whether or not back schools help with long-term pain. Different studies have conflicting results.

What are they?

Back schools are classes where people are taught about back pain, usually over a few weeks. The number of classes and what you learn in them is different in each of the programmes. Generally, people learn about how their back works, what can go wrong with their back, the best ways to stand and move to do less damage to their back, and how to safely take part in sport and exercise. The classes are taught by physiotherapists or doctors and may include exercises.

How can they help?

If you have long-term back pain, taking part in a back school could help reduce your pain and help you move around more easily.^[107] ^[108] However, it's difficult to say for certain if back schools help. There are negative studies as well as positive ones.^[109]

In one study, after eight weeks, 70 in 100 people who went to back school felt that their back pain had got better, compared with 15 in 100 people who had no treatment.^[108] After six months, 40 in 100 people who went to back school still felt better. But we don't know if the benefits last for more than six months.

Back pain

In a review of the research, several studies found no benefits for back schools, or just a short-term benefit. ^[109]

In some studies, back schools seemed to work better than other treatments, such as [exercise](#) , [spinal manipulation](#) , [nonsteroidal anti-inflammatory drugs](#) (NSAIDs), and [physiotherapy](#) . ^[110] ^[111]

How do they work?

The theory is that teaching people how their backs work and what causes pain means that they can adapt their lives to reduce their pain and prevent future back problems. For example, people may be taught the best way to get out of bed and lift and carry things. This could mean that they avoid putting pressure on the part of the back that is causing them problems. It may also mean that they use their backs properly in the future.

Can they be harmful?

It is very unlikely that attending a back school will make your pain worse or cause any harm. However, the studies haven't looked at this specifically.

How good is the research on back schools for long-term back pain?

There's quite a lot of evidence on back schools for people with low back pain.

We found two big summaries of the research into back schools. ^[112] ^[109]

The first looked at 19 studies, including more than 3,500 people with low back pain. But only six of the studies were good quality.

Behavioural therapy for long-term back pain

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[How good is the research on behavioural therapy for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about behavioural therapy, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

Yes. If you have long-term back pain there's a good chance that behavioural therapy, which is a type of [psychotherapy](#) , can help. Your back pain should ease and you should be able to do more after this treatment.

What is it?

Behavioural therapy is a talking treatment that's used for people who have suffered from different kinds of pain over a long period of time. You have regular sessions with a trained therapist by yourself or in a group, and you may meet every week. Behavioural therapy is based on the belief that the way you feel about your pain can make your pain better or worse.

There are lots of different types of behavioural therapy and many different techniques that are used by therapists to help your pain. Some of these techniques include teaching you how to relax and helping you lower your level of stress.

How can it help?

If you have long-term back pain, behavioural therapy can help to reduce the amount of pain you are in and help you move around more easily. ^{[113] [114] [115] [116]} It can also help to reduce anxiety, tension, and depression and help you get back to work sooner than other standard treatments, such as [painkillers](#) , [bed rest](#) , or [physiotherapy](#) .

All types of behavioural therapy seem to help about the same.

Some doctors use behavioural therapy with other treatments (such as back exercises) for people with long-term back pain. Combining treatments this way can help you become more able to get back to your normal daily activities. ^[114]

How does it work?

When you have behavioural therapy you learn how the way you think and behave can affect how you feel, including how you feel pain, such as back pain. You can learn how you react to this pain. For example, it might make you feel angry, anxious, and depressed.

With the help of a therapist you can learn how to respond differently to back pain so that you relax and stay calm when you would usually feel the opposite. This might make you less angry and anxious about your back pain so that it starts to feel less of a burden, and you can manage your life better.

Can it be harmful?

None of the studies we found reported any harm to people from behavioural therapy. That doesn't mean that behavioural therapy is harmless. It's just that researchers didn't look for or report side effects from this treatment.

How good is the research on behavioural therapy for long-term back pain?

There's some good evidence on using behavioural therapy for long-term back pain.

We found several reviews of the research (called [systematic reviews](#)). ^{[114] [116]} One review looked at 21 individual studies. ^[114]

Nonsteroidal anti-inflammatory drugs (NSAIDs) for long-term back pain

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[How good is the research on NSAIDs for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about nonsteroidal anti-inflammatory drugs (NSAIDs), a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

Yes. If you've got back pain, then taking **nonsteroidal anti-inflammatory drugs** (NSAIDs) will probably reduce your pain. However, these drugs can have side effects, especially if you take them regularly for a long time. For example, NSAIDs can irritate the lining of your stomach and increase your risk of a stomach ulcer.

NSAIDs seem to work as well as other [painkillers](#) such as paracetamol, and other drugs such as [muscle relaxants](#) .

What are they?

NSAIDs are painkillers. They also help reduce **inflammation** of soft tissues that may be causing the soreness in your back.

There are lots of different NSAIDs. Here are some examples of NSAIDs (with brand names) that may be used for back pain.

- diclofenac (Voltarol)
- deflunisal (Dolobid)
- ketoprofen (Oruvail, Orudis)
- nabumetone (Relifex)
- naproxen (Naprosyn, Arthroxen)

You need a prescription for most of these drugs. But you can buy lower doses of ibuprofen (Nurofen) and diclofenac (Voltarol Pain-eze tablets) over the counter at pharmacies and supermarkets.

Back pain

COX-2 inhibitors

Some NSAIDs are called COX-2 inhibitors. These are newer NSAIDs that may cause less irritation to the stomach than the older ones. Researchers don't know for certain though. ^[26]

Examples include celecoxib (brand name Celebrex) and etoricoxib (Arcoxia).

How can they help?

Taking a nonsteroidal anti-inflammatory drug will give you short-term relief from back pain. ^{[27] [117] [118]}

If you are having problems moving around or exercising, NSAIDs may help you become more active again. In turn, this could help you to become physically fit, less stiff and more able to move around in the future. ^[27]

If you take an NSAID, you may not need to take other painkillers. ^[27]

All the NSAIDs seem to work about the same. ^{[27] [119]} One study found that a newer NSAID (a COX-2 inhibitor called etoricoxib) didn't work any better than an older NSAID (called diclofenac). ^[120]

How do they work?

NSAIDs can reduce the inflammation of soft tissues in your back that may be contributing to your back pain. They are also painkillers.

Can they be harmful?

NSAIDs can cause an upset stomach and give you stomach pain, sickness, or diarrhoea. ^[16] Taking them with food may help to reduce this problem.

NSAIDs can also cause more serious stomach problems. They can irritate the lining of your stomach, which can increase your risk of a **stomach ulcer** or even bleeding inside your stomach. ^[16] The risk is bigger if you're older or if you're taking high doses of NSAIDs.

Talk to your doctor if you have a stomach ulcer, or if you've ever had one in the past. NSAIDs might not be suitable for you, so you'll need to take another type of painkiller instead.

If you're taking NSAIDs regularly, there are drug treatments that can help protect your stomach. Ask your doctor about these.

There doesn't seem to be a difference between how well various NSAIDs work. So ask your doctor to recommend one that has less chance of giving you side effects. Ibuprofen seems to have the least side effects, but this may be because doctors tend to prescribe it at lower doses than the other NSAIDs. ^{[16] [29]}

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Some NSAIDs can increase the risk of having a heart attack or a stroke. But the risk is small, and linked to taking the drugs at high doses for a long time. To learn more, see [Warnings about side effects of NSAIDs](#) .

Also, you should not take etoricoxib if you have **high blood pressure** .^[16] However, you can take it once your blood pressure is under control. If you're taking etoricoxib, your doctor will probably recommend regular checks to make sure your blood pressure doesn't become high.

How good is the research on NSAIDs for long-term back pain?

There is a lot of good research into whether **nonsteroidal anti-inflammatory drugs** (NSAIDs) work for long-term back pain.

We found several studies that looked at people who had long-term back pain.^[121] ^[122]
^[123] In one of the studies some people took an NSAID while others took a dummy treatment (a **placebo**).^[124]

Other studies have compared different NSAIDs with each other.^[121] ^[124] And others have compared them with paracetamol and stronger painkillers called opioids (such as codeine).^[124]

Muscle relaxants for long-term back pain

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[How good is the research on muscle relaxants for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about muscle relaxants, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

Yes, but there are drawbacks. Muscle relaxants, such as diazepam, can ease muscle tension and pain within a few hours.

But they also cause side effects. Most people taking muscle relaxants get dizzy or drowsy. There is also a risk you could get addicted to these drugs, even if you take them for a short time.

There doesn't seem to be one muscle relaxant that is more likely than another to reduce pain.

Back pain

What are they?

Muscle relaxants are drugs that relax your muscles. These drugs also make you calm and sleepy (they are sedatives). Muscle relaxants are used for people in severe pain, but only for a short period.

Doctors quite often prescribe them to relieve spasms in back muscles that could be causing pain. A spasm is when a muscle suddenly tightens uncontrollably. This can be very painful.

The muscle relaxant that doctors usually prescribe for bad back pain is called diazepam. Other drugs (with brand names) include:

- baclofen (Lioresal)
- dantrolene (Dantrium)
- lorazepam (Ativan)
- tizanidine (Zanaflex).

How can they help?

Muscle relaxants may work if you have long-term back pain.^[40] But muscle relaxants are not a long-term treatment. You could easily become dependent on them.

These drugs are only usually given when your back pain is at its most severe, and you will be advised to take them for only a short time.^[42]

If your doctor suggests that you take a muscle relaxant for your back pain, you may want to discuss alternatives. For example, [nonsteroidal anti-inflammatory drugs](#) (NSAIDs) work as well as muscle relaxants, are less likely to have side effects, and their side effects are also less serious.

How do they work?

Doctors think that because these drugs relax muscles, they reduce any pain that might be caused by spasms or tension in the muscles of the back.

If your back hurts, you may try to avoid pain by being careful about how you move. This can cause extra tension in your back. Restricting your movements can make your back feel more uncomfortable, sore, and stiff. Muscle relaxants should help because they generally make you feel more relaxed and less tense.

Can they be harmful?

These drugs can cause side effects. They can make you feel sick, dizzy, or drowsy.^[40] This happened after just one week of treatment in up to 70 in 100 of the people in the

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studies we have looked at. You may not be able to drive if your treatment makes you drowsy.

Some muscle relaxants can cause unpleasant side effects when you stop taking them. These are called withdrawal symptoms. Baclofen, diazepam, and lorazepam can all cause this problem. Your doctor will help you cut down slowly when you stop taking them. [44]

Dantrolene and tizanidine can both damage your liver. [44] If you take them, you'll need tests to make sure your liver is still working properly. See your doctor if you get flu-symptoms, feel sick, feel unusually tired, don't feel like eating, or get a yellow tinge to your skin or eyes. These could be a sign of liver problems.

Tizanidine reacts badly to other common medicines, including some **antibiotics**. Always tell your doctor about any other medicines you are taking. [45]

How good is the research on muscle relaxants for long-term back pain?

There's some good evidence on using muscle relaxants for long-term back pain.

We found one summary of the evidence (a **systematic review**). [40] It looked at five studies covering more than 500 people.

Acupuncture for long-term back pain

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[How good is the research on acupuncture for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about acupuncture, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

Possibly. There's some evidence that acupuncture has short-term benefits for people with long-lasting (chronic) back pain. But we don't know whether the benefits last. Some studies have found that acupuncture is no better than sham (fake) acupuncture, especially in the long term.

What is it?

Acupuncture is a traditional Chinese treatment. It's a type of complementary or alternative medicine. If you have acupuncture, a trained acupuncturist puts sterile needles into your skin.

Back pain

Traditional acupuncturists believe that acupuncture improves the flow of energy around your body. Some modern doctors think that putting needles in the skin could encourage the release of natural chemicals that block pain and help you feel relaxed.^[46] Another theory is that acupuncture might work a bit like talking therapy. Discussing your situation with an acupuncturist and relaxing while the needles are put in might reduce anxiety, or help you cope better with pain.

You may have acupuncture alongside other treatments for back pain, such as [NSAIDs](#) , [exercise](#) , or [behavioural therapy](#) .

How can it help?

Some studies suggest that acupuncture might help with back pain.^[125] However, most of the positive studies compared people having acupuncture with people who didn't get any treatment. This makes it hard to know whether people's improvement came from the placebo effect . This is where people feel better because they expect to feel better, even though the treatment itself was inactive.

Some studies have compared acupuncture with 'sham' acupuncture. The idea is to compensate for the placebo effect. In sham acupuncture, the needles might be put in places that aren't traditional acupuncture points, or the needles might not really pierce the skin at all. In trials, there doesn't seem to be any difference between 'real' acupuncture and 'sham' acupuncture.^[125]

How does it work?

It's not clear how acupuncture might work. One theory is that it stimulates the release of natural chemicals in your body that block pain. These chemicals are called endorphins and enkephalins.

Can it be harmful?

Acupuncture is safe, as long as you are treated by a trained acupuncturist.

One study found that, in rare cases, acupuncture can have serious risks.^[126] These include getting infections like hepatitis or HIV, or needles causing damage to your internal organs. But if your acupuncturist is properly trained and uses sterile equipment, this shouldn't happen.

How good is the research on acupuncture for long-term back pain?

There's been quite a lot of research on acupuncture for long-term back pain. But the individual studies are quite small and there are some problems with the way they were run. This makes it hard to rely on the results.^[126] ^[125]

Antidepressants for long-term back pain

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[How good is the research on antidepressants for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about antidepressants, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know whether taking an antidepressant might help to reduce long-term (chronic) back pain. The research gives mixed results. We do know that these drugs can cause side effects.

What are they?

Antidepressants are normally prescribed if you are feeling depressed. They are designed to change the balance of chemicals in your brain and help you feel better.

To find out more about depression, see our information on [Depression in adults](#) .

There are two reasons why your doctor may suggest that you take antidepressants for back pain. First, low doses of antidepressants are thought to reduce pain. Second, constant pain can take its toll on you. Some people with back pain get depressed. However, it's not always clear if these feelings are caused by back pain or if they have caused the pain in the first place.

Doctors often use a type of antidepressant called a tricyclic antidepressant for bad back pain. These drugs have been around for many years. Common examples include:

- amitriptyline
- doxepin
- imipramine
- nortriptyline.

Newer antidepressants, called [selective serotonin reuptake inhibitors](#) (or SSRIs), are also sometimes prescribed for back pain. They include:

- fluoxetine (brand name Prozac)
- paroxetine (Seroxat).

How can they help?

Some individual studies have found that antidepressants can help with back pain.^[127]
^[128] However, overall, the research is mixed.

Researchers have looked at the best-quality studies on antidepressants for back pain. Five studies found antidepressants didn't work, but three found that they reduced pain.^[128]

One review found evidence that tricyclic antidepressants, but not other kinds, might work for back pain.^[127] However, more recent research found no benefit from any type of antidepressant drug.^[128]

How do they work?

Antidepressants alter the levels of certain chemicals in your brain that can improve your mood. They are also thought to relieve pain, but it is not clear how they do this.

Can they be harmful?

Antidepressants can have unpleasant side effects. Some common side effects include getting a dry mouth, feeling drowsy, getting constipated, or having headaches.^[74] These symptoms may clear up after you take antidepressants for a while.

The group of antidepressants called SSRIs can cause withdrawal symptoms when you reduce the dose or stop taking them. Some common withdrawal symptoms are dizziness, sickness, and headaches.^[129]

To find out more about the side effects of these drugs, see [What treatments work for depression?](#) in our section on depression. Bear in mind that antidepressants used for back pain are given at a lower dose than for depression, so there may be fewer side effects.

Advice for doctors

In the UK, there is government advice to doctors on how to safely prescribe SSRIs.^[130] The advice is that if you are taking these drugs you should be carefully checked when you begin your treatment or when your dose is changed. It is especially important to be checked if you have symptoms such as feeling agitated and restless, or if your depression gets worse. You should also be on the lowest dose that works.^[130]

Self harm and suicide

Research has found that children, teenagers, and young adults taking antidepressants of all kinds are more likely to think about suicide or try to harm themselves.^[131]

Back pain

The risk of suicidal thoughts is highest if you're under 18. ^[131] Among people under 18 taking an antidepressant, an extra 14 in 1,000 thought about suicide.

The researchers also found that there's a risk for young adults up to the age of 24. ^[131] But their risk wasn't as big as the risk for people under 18. An extra 5 in 1,000 people between the ages of 18 and 24 thought about suicide.

The research doesn't seem to show an increased risk of suicidal thoughts or self-harm for people over the age of 24. ^[131]

But doctors and caregivers are advised to keep a careful check on anyone taking antidepressants for signs of suicidal thoughts. You are more likely to get these thoughts in the early stages of your treatment, or if the dose of the antidepressant you're taking is changed. You may also be at risk if you have had thoughts about harming or killing yourself before. ^[132]

If you're taking an antidepressant and are worried about any thoughts or feelings you have, see your doctor or go to a hospital straight away. You might also find it helpful to tell a relative or close friend about your condition. You could ask them to tell you if they think your depression is getting worse or if they are worried about changes in your behaviour. ^[132]

How good is the research on antidepressants for long-term back pain?

We found two summaries of the research (called [systematic reviews](#)) looking at antidepressants in people with long-term back pain. ^[133] ^[128]

Back supports for long-term back pain

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[How good is the research on back supports for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about back supports, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know whether wearing a back support, such as a corset or a wide belt, will help long-term (chronic) back pain or prevent you from injuring your back in the first place. Some research has been done to discover whether back supports work, but there is not enough to know for certain.

What are they?

If you have back pain, some doctors and **physiotherapists** may recommend that you wear a support belt or corset to help stabilise your spine, keep it in line, and restrain you from making any awkward movements that could damage your back or make the pain worse.

Supports are sometimes recommended to prevent back pain in people who have jobs that involve a lot of bending and lifting, such as airline baggage handlers and grocery warehouse workers.

How can they help?

We don't know if wearing a support belt or corset will help reduce your pain or reduce your chances of injury. There hasn't been much research.

The research that has been done suggests that supports don't help with long-term back pain. ^[52] It's also doubtful whether they can stop pain from happening in the first place.

How do they work?

Wearing a tight-fitting belt or corset will squash your stomach muscles and make them tense up. This may cause the opposite muscles (those in your back) to relax because muscle groups work in pairs (like a pulley-and-lever system): as one set contracts, the other relaxes. Less stress on the back should cause less pain.

Can they be harmful?

The supports can rub against your skin and make it sore and cause stomach problems. Also, if you wear them for a long time, they may weaken your stomach and back muscles and raise your blood pressure. They're also hot and uncomfortable and may give people a false sense of security. ^[74]

How good is the research on back supports for long-term back pain?

We found four studies looking at more than 1,000 people. These studies looked at people with both short- and long-term pain. ^[52]

We also found studies looking at whether wearing a back support can stop back pain from happening in the first place. ^[52]

Biofeedback for long-term back pain

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[How good is the research on biofeedback for long-term back pain?](#)

Back pain

This information is for people who have long-term back pain. It tells you about biofeedback, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. There isn't enough good research to say whether or not this treatment works for people with any kind of back pain.

What is it?

Biofeedback is supposed to help you relax and reduce the tension, and therefore the pain, in your back muscles.

It is based on the idea that you can learn to control some of the things that your body normally does automatically, such as controlling the tension in your muscles.

Biofeedback is a technique designed to help people control the tension in their back muscles. To begin with, you wear a small electronic monitoring device that measures how tense your muscles are. It does this by recording the electrical activity in your muscles. You'll be taught how to relax (maybe through meditation) and to visualise what a relaxed muscle feels like. The electronic monitor will beep or flash if your muscles relax, and your brain will start to associate the practice of relaxation with reduced tension in your muscles.

Biofeedback may be used by behavioural **psychologists**. It can take quite a long time to learn biofeedback techniques, and they tend to be suggested as an option for people with long-term (chronic) back pain.

How can it help?

Research on biofeedback has found that it doesn't help back pain or improve the ability to move around. ^[134]

How does it work?

The theory is that you can train your brain to relax tense muscles. Generally, people feel better when they feel they are doing something for themselves to help their back pain.

Can it be harmful?

None of the studies we have looked at measured whether biofeedback can be harmful. But generally it's thought to be fairly safe.

How good is the research on biofeedback for long-term back pain?

There hasn't been much research about biofeedback for back pain.

We found one fairly good **review** that weighed the results of five small studies involving a total of 168 people with long-term back pain. ^[134]

Epidural steroid injections for long-term back pain

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[Can they be harmful?](#)

[How good is the research on epidural steroid injections for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about epidural steroid injections, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know. The research on this treatment is too weak to draw firm conclusions.

What are they?

Epidural steroid injections are used to reduce **inflammation** and pain in your back. Doctors inject a steroid (which reduces inflammation) into the area between the nerves of the spinal cord and the lining surrounding them (epidural space). You may have the injection with or without a **local anaesthetic**.

Epidural steroids are usually injected by anaesthetists or other medical specialists. It's unlikely that your GP will inject them.

The full name for these drugs is corticosteroids. They are not the same as the anabolic steroids sometimes used by body builders. Corticosteroids are similar to the chemicals made by your body to reduce inflammation (swelling).

How can they help?

We don't know whether epidural steroid injections can help with back pain. There isn't much good research on this treatment. ^[135]

How do they work?

These drugs may numb the nerve roots and reduce any inflammation, but no one really knows how they work to treat back pain.

Can they be harmful?

All epidural injections have risks. For example, studies in people with some types of spine pain have found that epidural injections can cause infections. ^[136] It's important these injections are given by an experienced doctor. ^[137]

How good is the research on epidural steroid injections for long-term back pain?

We found only a few small studies that looked at this treatment. ^[135] This means that we can't draw any firm conclusions.

Facet joint injections for long-term back pain

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[How good is the research on facet joint injections for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about facet joint injections, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We don't know. There's not much research on this treatment. We do know that facet joint injections can have side effects.

What are they?

Doctors inject an **anaesthetic** (which numbs pain) or a steroid drug (which reduces inflammation) into the joints that link the small bones (vertebrae) of your spine together. These joints (the **facet joints**) are covered with cartilage and a lubricating fluid, but they get a lot of wear and tear and can become inflamed and sore. Your doctor may prescribe these injections to temporarily block the type of pain that stops you from moving around.

How can they help?

We don't know whether facet joint injections can help with long-term back pain. There's not much research. One study found no difference between steroid injections and dummy (**placebo**) injections using salt water. ^[138]

How do they work?

Some doctors think that because anaesthetics relieve pain and steroids reduce inflammation, it may be useful to inject them into painful parts of your back.

Can they be harmful?

Having an injection in an area that is already very sore can be painful. Some research has found that the injections may cause rare but serious side effects, such as infection, bleeding, meningitis (inflammation of the fluid in the spinal canal), and possible damage to your nervous system. ^[53]

How good is the research on facet joint injections for long-term back pain?

There is not much good research on whether facet joint injections will help you if you have long-term back pain.

The best [review](#) we found looked at the results from one study of 101 people. ^[139]

Injections into trigger points or ligaments for long-term back pain

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[How good is the research on injections into trigger points or ligaments for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about injections into trigger points or ligaments, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Do they work?

We're not sure. There's no evidence that this treatment will help if you have long-term (chronic) back pain.

What are they?

If areas of your back feel knotted and they hurt when you press on them, your doctor may suggest you have a [local anaesthetic](#) injected into these 'trigger points' to help relieve your pain. Injecting an anaesthetic into your ligaments (the tissues that link the small bones of your spine together) is another way to try to reduce your pain.

Sometimes a steroid is put in the injection with the local anaesthetic. Steroids are drugs that help to fight [inflammation](#). If you have back pain, there might be some swelling that's causing your pain. Your doctor may try giving you steroids to reduce the swelling, which may also ease your pain.

It is important to remember that these are not the same kind of steroids that athletes and bodybuilders use. Those are **anabolic steroids**.

The steroids your doctor may use in an injection are exactly the same as the chemicals made by your body to reduce inflammation (swelling). Their full name is **corticosteroids**.

How can they help?

We didn't find any studies that showed that having injections into trigger points or ligaments in your back can help reduce long-term back pain. ^[138]

How do they work?

We don't know why injecting a drug that has a short-term effect on your body, like an anaesthetic or a steroid, would give you long-term relief. It may be that both drugs have a long-term effect.

Can they be harmful?

The side effects of these injections are rare. But they can be serious. They include damage to nerves or other tissues, infections and haemorrhages (heavy bleeding).^[74]

How good is the research on injections into trigger points or ligaments for long-term back pain?

We found one summary of the research, which included four good-quality studies (called randomised controlled trials). It looked at whether injections into trigger points can help long-term back pain.^[138] Altogether, there were 200 people involved in the studies.

Massage for long-term back pain

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[How good is the research on massage for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about massage, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

Probably. If you've had back pain for a long time, massage is likely to help you in the short term. However, it doesn't seem to help with pain in the long term.

What is it?

A massage therapist or physiotherapist uses their hands to knead, rub, roll, stroke, and manipulate the soft areas over your lower back. They may also massage other parts of your body, or your whole body.

Massage therapists do not manipulate bones or joints. Massage is a gentle treatment, but some types of massage are more intensive than others. Massage is designed to relax your mind as well as your body, and ease tension in your muscles.

You may have a single session, or short sessions once a day or once a week. Massage treatment can go on as long as you need it. Most studies tested massage treatments given two or three times a week for several weeks.

How can it help?

Massage can help with back pain in the short term, and help you do more of your usual activities. ^[140] However, it doesn't seem to have a long-term effect on pain.

How does it work?

If you bang your head or your knee on a cupboard door, you naturally rub it to ease the pain. Massage is an extension of this natural reaction. Massaging soft tissue (skin, fat, and muscle) helps ease pain by relaxing you physically and mentally. It also helps your body to release **endorphins**, which are your body's natural painkillers.

Massage can also be a kind of 'distraction treatment'. The nerves connecting your back to your brain are so busy transmitting signals from the massage that they stop transmitting pain signals from your sore back. ^[140]

When you have pain for a long time, it starts to affect the way you think, the way you behave, and how you feel emotionally. It's hard to stay positive, happy, and active when all you can do is think about the pain in your back. So there's more to treating long term back pain than just easing your pain. You need help with your thoughts and feelings too.

Can it be harmful?

Massage is likely to be safe. In studies, about 1 in 10 people got some soreness just after their massage, but it didn't last very long. ^[140]

You shouldn't have massage treatment over skin that is **inflamed** or **infected**. ^[140]

How good is the research on massage for long-term back pain?

We found one **review**, which looked at the evidence from lots of different studies. ^[140] But the studies were small, so we can't read too much into them.

Spinal manipulation for long-term back pain

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[How good is the research on spinal manipulation for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about spinal manipulation, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Back pain

Does it work?

Probably. There's evidence that having your spine manipulated can help to reduce back pain. This treatment may also help you get back to work sooner. However, other studies suggest that manipulation might not be any better than the usual treatments given by a doctor, such as painkillers and advice on exercise.

Manipulation has some risks. In rare cases, it can damage the nerves or blood vessels in your spine.

What is it?

Spinal manipulation is when a health professional uses their hands to move parts of your backbone (spine). It can be done by **chiropractors**, **osteopaths**, and some **physiotherapists**. The aim is to adjust the small joints between the bones (vertebrae) in your spine to relieve pain and stiffness.

The best-known technique is the 'high-velocity thrust'. This is where a therapist uses short, sharp movements to thrust a joint slightly beyond the range it would usually be able to move. Chiropractors are more likely to press directly on the small bones (vertebrae) in your spine with their hands. And osteopaths may twist, push, or pull your limbs to make levered thrusts. High-velocity thrusts often produce the sound of joints cracking.

If you have spinal manipulation, it's important to go to someone who is properly trained and experienced in giving this treatment.

In the UK, all osteopaths, chiropractors, and NHS physiotherapists are registered. You may be referred to an NHS physiotherapist. If you are considering private treatment for spinal manipulation, ask your GP for advice about who to see.

How can it help?

Some research has found that spinal manipulation can help reduce pain in both the short term and long term.^[39] However, other studies have found that manipulation is no better than exercise, physiotherapy, or just being cared for by your GP.

One study found that, if you've had back pain for a long time, then having your spine manipulated may also help you move more easily and get back to work sooner.^[141] In the study, 2 in 10 people who had spinal manipulation plus exercise therapy were on sick leave after 12 months, compared with 6 in 10 people who just had exercise therapy for their back pain.^[141]

A more recent study found that manipulation by a chiropractor was no better than the usual care offered by a GP, which included exercises, lifestyle advice, and medicines.^[142]

Lots of the studies on spinal manipulation are quite small. This makes it harder to be sure whether this treatment works or not for long-term back pain.

How does it work?

We don't know exactly how manipulation might work. Chiropractors believe that some people have back pain because parts of their spine are slightly out of line (these misalignments are called **subluxations**). Manipulation is believed to realign any parts of the spine that are out of place.

It's also possible that manipulation might take pressure off nerves in your back, which could help with pain. Another explanation is that manipulation could help relax the muscles around your spine.

Can it be harmful?

About half the people who have spinal manipulation get minor side effects, such as discomfort, a headache, nausea, or dizziness.^[35] Serious side effects seem to be rare, but there hasn't been enough good research to know exactly how often they happen.

However, another study points out that not all serious side effects of manipulation by a chiropractor get reported.^[37] So, although serious side effects appear to be rare, we don't know for certain how often they happen. There doesn't seem to be any way to predict who might be at risk of more serious problems. So, the author of the study suggests that you:

- Make sure you go to a qualified therapist
- Think about stopping treatment if you get any side effects at all, even if they're minor.

Some guidelines suggest that manipulation shouldn't be used for people who already have problems affecting their brain or nerves.^[38]

Some doctors are concerned that spinal manipulation may make a slipped disc worse, although there is no evidence for this. In fact, there is some evidence that this treatment is likely to help if you have a slipped disc. See our articles on [Spinal manipulation for a slipped disc](#) for more information.

How good is the research on spinal manipulation for long-term back pain?

The studies we found only followed people for a few weeks after their treatment. This makes it difficult to say whether spinal manipulation works for a long time.

We found one summary of the research (called a **systematic review**) that looked at 14 studies of spinal manipulation in 1,596 people with long-term back pain.^[143]

Some of the studies compared spinal manipulation with other treatments including [bed rest](#), [traction](#), physiotherapy, back schools, and not having any treatment at all.^[143]

We also found some other small studies that looked at the effects of spinal manipulation on long-term back pain. ^[144]

Transcutaneous electrical nerve stimulation (TENS) for long-term back pain

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[How good is the research on TENS for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about transcutaneous electrical nerve stimulation (TENS), a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. It may help, but there hasn't been enough research to say if TENS works for long-term (chronic) back pain.

What is it?

A TENS unit is a small battery-operated device, about the size of a pack of cards, that is fixed onto a belt.

From this device, small wires are connected to jelly-coated pads. You stick these pads onto your skin where you feel the most pain.

When you switch the device on, small pulses of electricity stimulate the nerves in your spine. This may feel prickly. The idea is that this blocks pain messages to your brain.

How can it help?

We're not sure if TENS works or not for long-term back pain. Studies looking at pain have had conflicting results. ^[145] TENS doesn't seem to help people get back to their normal activities any faster.

How does it work?

Doctors think TENS units may help your pain by stimulating the nerves in your back with a small electrical current. While these nerves are being 'tickled' by the electrical current, they are less able to carry the feelings of pain from your back up to your brain. The theory is that you feel less pain in your back because your nerves are 'concentrating' on something else.

An example of this idea is if you rub your hand after hurting it, the nerves in your hand just feel the rubbing rather than the pain.

Can it be harmful?

The risks of TENS are probably low. One study found that the electrical pads could irritate people's skin. ^[145]

How good is the research on TENS for long-term back pain?

There hasn't been enough good research to say whether TENS (transcutaneous electrical nerve stimulation) works for people with long-term back pain.

We found one [review](#) of the research. ^[145] But some of the studies in the review were too small to be reliable.

Traction for long-term back pain

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[How good is the research on traction for long-term back pain?](#)

This information is for people who have long-term back pain. It tells you about traction, a treatment used for long-term back pain. It is based on the best and most up-to-date research.

Does it work?

We don't know. There hasn't been any good research on whether traction helps people with long-term (chronic) back pain. We need more research on this treatment.

What is it?

If you are put in traction, you'll lie in bed and your spine will be gently stretched by weights. The traction can be done by hand by a [physiotherapist](#) or by a machine that uses a motor to move the weights.

How can it help?

We don't know whether traction can help. There's no research looking at whether traction can help people with long-term back pain. ^[77]

How does it work?

The idea is that stretching your back will create space between the small bones (vertebrae) that make up your spine. The theory is that this will relieve the pressure on the discs that fit between these bones, release any trapped nerves, and relieve tension in your muscles. Doctors think that the force needed to stretch your spine enough for the treatment to help must be more than a quarter of your weight.

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Some doctors and physiotherapists have pointed out that if your pain is caused by a torn muscle, a pulled ligament, or a leaking disc, then stretching your back won't ease the pain. The problem with back pain is that it's often difficult to work out what's causing the pain.

Can it be harmful?

Traction can weaken your body. Lying in bed can make your muscles lose their tone and get flabby and weak. It can also weaken your bones because you're not walking around. Traction may also lead to a serious condition called thrombophlebitis (inflammation related to blood clots in your veins).^[74]

How good is the research on traction for long-term back pain?

There haven't been many good studies in this group of people.^[146] More research is needed before we can say whether this treatment works.

Further informations:

More about the causes of back pain

Your doctor probably won't be able to tell you the exact cause of your back pain. But your back will probably get better by itself. In rare instances, however, back pain can be caused by infections, tumours and other serious problems.

Here are the most common diagnoses of low back pain among patients seen by GPs:^[7]

Diagnosis	Back pain patients with this diagnosis	Discussion
Uncertain	Up to 85%	Back pain is usually caused by damage to your muscles, ligaments or vertebrae. Often the problem causing the pain is not serious or long-lasting, and is never worked out for certain.
Compression fracture	4%	This is a fracture in the vertebrae, which may be the result of a fall or other injury. It happens most often among older people and those with thin and brittle bones (osteoporosis).
Spondylolisthesis	3%	This is when one vertebra slips forwards over another. If you picture the spine as a ladder with each vertebra as a rung, imagine one rung sliding out of line with the rest.
Cancer	0.7% (about 7 in 1,000)	Back pain can be caused by cancer that has started in your spine or that has spread there from somewhere else in your body. But this is a very

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		rare cause of back pain. Only about 7 in every 1,000 people who see their doctor for back pain have cancer. If you have not had cancer in the past, this is very unlikely to be the reason for your back pain.
Ankylosing spondylitis	0.3% (about 3 in 1,000)	This is a rare inflammatory disorder (a condition that makes part of your body swollen). It affects the ligaments and bones of your spine. It is more common among younger people with back pain. You can think of it as arthritis of the spine.
Spinal infection	0.01% (about 1 in 10,000)	Very rarely, pain in your back is caused by an infection in that area. Usually the infection is one that has spread from another place, such as your urinary tract, through your bloodstream. The pain can be, but is not always, accompanied by a fever. However, just because you have a fever and back pain, however, does not mean that you have a spinal infection.

Warnings about side effects of NSAIDs

Nonsteroidal anti-inflammatory drugs (NSAIDs) are used to treat pain and inflammation. Ibuprofen is probably the best-known NSAID. Although they are often useful, they can have side effects, including causing stomach upsets and ulcers, or more rarely, allergies or problems with your kidneys or liver. ^[16]

People who take high doses of some NSAIDs for a long time may have a slightly higher risk of getting a heart attack or a stroke . High doses of NSAIDs may be used over a long period of time to treat conditions such as arthritis .

It's not always clear what counts as a long time for taking NSAIDs. In some research, two-thirds of the heart attacks happened in studies where people took NSAIDs for a year or longer. ^[17]

Below, we look at the different kinds of NSAIDs and what the research that has been done so far shows about their safety.

NSAIDs you can buy over the counter

You can buy low doses of some NSAIDs, such as ibuprofen, at a pharmacy. Taken at this lower dose and for a short time, ibuprofen doesn't seem to increase people's risk of a heart attack or stroke. ^[18]

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You can also get larger doses of ibuprofen on prescription from a doctor (see our information on prescription ibuprofen below). Taking these larger doses every day may slightly increase your risk of a heart attack or stroke. But these doses are higher than the amount you'd take for a headache or other kinds of short-term pain.

Diclofenac is another NSAID that you can buy in low doses over the counter. It's sold for treating headaches, other aches and pains, and cold and flu symptoms. Diclofenac does increase the risk of heart attacks and strokes if used regularly.^[19] However, there's probably much less of a risk if you're taking low doses for short periods of time.^[20] People who have heart problems shouldn't take diclofenac.^[21]

You can also buy an NSAID called naproxen without a prescription, for treating period pain. Naproxen doesn't seem to cause much increase in the risk of heart attacks or strokes.^[17] ^[19] ^[22]

NSAIDs your doctor may prescribe

Selective COX-2 inhibitors

Selective COX-2 inhibitors are a newer type of NSAID. Some people got stomach problems as a side effect of taking older NSAIDs. COX-2 inhibitors were designed to cause less irritation to your stomach. But research has found that these newer drugs can slightly increase your risk of a heart attack or a stroke.

COX-2 inhibitors called valdecoxib (brand name Bextra) and rofecoxib (Vioxx) have been taken off the market because of their side effects.^[18]

Other COX-2 inhibitors are still available in the UK. These include:

- celecoxib (Celebrex)
- etoricoxib (Arcoxia)
- meloxicam (Mobic).

The overall risk of having a heart attack or stroke when taking these drugs is fairly small. For every 1,000 people regularly taking high doses, an extra three people will have a heart attack or stroke.^[17] Your doctor can help you weigh up the risks and benefits these drugs will have for you.

Also, you should not take etoricoxib if you have high blood pressure.^[16] But you can take it once your blood pressure is under control.

Other NSAIDs

There are several NSAIDs that aren't COX-2 inhibitors, which may also be prescribed by your doctor. They include (with brand names):

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- diclofenac (Diclomax, Motifene, Voltarol)
- etodolac (Eccoxolac, Etopan, Lodine)
- ibuprofen (Brufen, Nurofen, Cuprofen)
- ketoprofen (Oruvail, Orudis)
- mefenamic acid (Ponstan)
- naproxen (Naprosyn, Arthrofen).

Some of these NSAIDs may cause a small increase in your risk of a heart attack or stroke. Research has found that regularly taking high doses of ibuprofen or diclofenac over a long period of time may increase your risk of these problems. ^[18]

The body that regulates medicines in the UK to make sure that they work and that they are safe is the Medicines and Healthcare products Regulatory Agency (MHRA). ^[21] It has issued a warning about diclofenac. The MHRA says that people should not take diclofenac if they have serious heart conditions, such as heart failure, heart disease, circulatory problems, or if they have ever had a heart attack or stroke.

We don't know exactly how big the risk is, or how it varies between the different drugs. The research that has been done so far suggests that:

- Taking diclofenac has a similar risk of heart attack to some COX-2 inhibitors. ^[18] That would mean three extra heart attacks or strokes each year for every 1,000 people taking high doses every day
- Naproxen may be safer than COX-2 inhibitors. ^[18] Most studies so far seem to show that naproxen doesn't increase people's chances of getting a heart attack or a stroke. ^{[17] [19]}

Guidelines for doctors say that for most people, the benefits of these drugs outweigh the risks. ^[23] The risks are probably lower for people who only take NSAIDs for a short time or take smaller doses. ^[18] One study did suggest a small increase in the risk of stroke in people who took naproxen, but it was less than the increased risk with a COX-2 inhibitor. ^[22]

Guidelines for doctors

Doctors have guidelines about how they should prescribe COX-2 inhibitors and other NSAIDs. They say that: ^[18]

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- People should take the lowest dose of an NSAID that works for them
- People should only take NSAIDs for as long as they need to. People taking them for a long time should have their treatment reviewed regularly
- People who already have heart disease shouldn't take COX-2 inhibitors
- Doctors should weigh up the risks and benefits of NSAIDs for each person. For example, your doctor may suggest a COX-2 inhibitor if you're at risk of stomach problems, but not of a heart attack
- People are more likely to get stomach problems if they take aspirin as well as an NSAID. People should only take aspirin and an NSAID together if they really need to.

If you're worried about the medicine you're taking, talk to your doctor.

Glossary:

NSAIDs

NSAID stands for nonsteroidal anti-inflammatory drug. NSAIDs help with pain, inflammation and fever. They are called 'nonsteroidal' because they don't contain any steroids. Aspirin and ibuprofen are both NSAIDs.

arthritis

Arthritis is when your joints become inflamed, making them stiff and painful. There are different kinds of arthritis. Osteoarthritis is the most common type. It happens when the cartilage at the end of your bones becomes damaged and then starts to grow abnormally. Rheumatoid arthritis happens because your immune system attacks the lining of your joints.

diabetes

Diabetes is a condition that causes too much sugar (glucose) to circulate in the blood. It happens when the body stops making a hormone called insulin (type 1 diabetes) or when insulin stops working (type 2 diabetes).

ligament

A ligament is a strong piece of tissue that connects one bone to another. For example, ligaments in your ankle connect the bones of your leg to the bones of your heel.

inflammation

Inflammation is when your skin or some other part of your body becomes red, swollen, hot, and sore. Inflammation happens because your body is trying to protect you from germs, from something that's in your body and could harm you (like a splinter) or from things that cause allergies (these things are called allergens). Inflammation is one of the ways in which your body heals an infection or an injury.

MRI scan

A magnetic resonance imaging (MRI) machine uses a magnetic field to create detailed pictures of the inside of your body.

CT scan

A CT scan is a type of X-ray. It takes several detailed pictures of the inside of your body from different angles. CT stands for computed tomography. It is also called a CAT scan (computed axial tomography).

X-ray

X-rays are pictures taken of the inside of your body. They are made by passing small amounts of radiation through your body and then onto film.

bone scan

A bone scan is a test to see if an infection or cancer has spread to a bone. It involves the injection of a substance into your blood stream that is taken up into your cells that have been affected by a disease. If the disease has spread to your bone, the areas it is in will glow brightly on X-rays.

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osteoporosis

Osteoporosis is when your bones get too brittle. It happens if not enough new bone tissue is growing to keep bones strong. If you have osteoporosis, the bones in your body may break easily.

acupuncture

If you have acupuncture, an acupuncturist puts thin, sterile needles into your skin. People who perform traditional acupuncture believe that it removes blockages along energy channels in your body. Other acupuncturists say that the needles help your body release natural chemicals that block pain.

steroids

Steroids are a type of chemical. Your body naturally produces steroids, which play a part in many of its processes. For example, steroids are involved in how your immune system, reproductive system and metabolism work. Steroids can also be given as medicines and are used for a number of different conditions: including asthma, rheumatoid arthritis and eczema. Corticosteroids are not the same as the steroids used by some body builders and athletes. Those steroids are called 'anabolic steroids'.

heart attack

Doctors call a heart attack an acute myocardial infarction (or acute MI). This is the name for the damage that occurs to the heart muscle if it isn't getting enough blood and oxygen because a branch of the coronary arteries is blocked. During a heart attack, you may have pain or heaviness over your chest, and pain, numbness or tingling in your jaw and left arm.

stroke

You have a stroke when the blood supply to a part of your brain is cut off. This damages your brain and can cause symptoms like weakness or numbness on one side of your body. You may also find it hard to speak if you've had a stroke.

psychologist

A psychologist is trained to study the human mind and human behaviour. A clinical psychologist provides mental health care in hospitals, clinics, schools or to private patients.

physiotherapist

A physiotherapist is a health professional who is trained to use physical activity and exercises to help people's bodies heal.

systematic reviews

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

stomach ulcer

A stomach ulcer is a break in the surface that covers the inside of your stomach.

withdrawal symptoms

Withdrawal symptoms are when you get unpleasant physical or mental symptoms because you stopped taking a drug you were physically dependent on. You can become physically dependent on a drug if it alters the level of certain chemicals in your body. This makes your body produce less of those chemicals or change how it responds to them. Also, some drugs work in a similar way to chemicals that naturally occur in your body. This may mean your body stops making its natural versions. If either of those things happens, your body will need the drug to function normally and you will feel or become ill if you suddenly stop taking the drug. You can get withdrawal symptoms from some prescription medicines, as well as some illegal drugs.

placebo

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

chiropractor

A chiropractor is a type of therapist who manipulates your joints and spine with his or her hands. This aims to encourage healing by realigning the bones of the joint or spine and relieving pressure on your nerves.

osteopath

An osteopath is a health professional who flexes and moves your bones, joints and muscle. Osteopaths aim to help people's bodies heal, particularly after injuries.

physiotherapy

Physiotherapy is a way of using movements or exercises to help people's bodies heal.

dependent

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Dependent is another way of saying addicted. If you're dependent on a drug, it means you get unpleasant withdrawal symptoms if you don't take it.

sedation

A feeling of relaxation and calm, or the act of creating a feeling of calm by administering a drug.

psychotherapy

Psychotherapy is a talking treatment. It is given by trained therapists (such as a psychiatrists, psychologists or social workers). Psychotherapy usually consists of regular sessions (often weekly) between the therapist and the patient. There are many types of psychotherapy, including cognitive behavioural therapy and interpersonal therapy.

local anaesthetic

A local anaesthetic is a painkiller that's used to numb one part of your body. You usually get local anaesthetics as injections.

McKenzie exercises

McKenzie exercises are exercises that aim to help with back pain. They may also be used to try to move pain from your legs to your lower back, where it may be easier to cope with.

Mensendieck therapy

Mensendieck therapy is a training programme. It includes exercises to improve your posture, as well as education about how to move in ways that won't damage your body. Mensendieck therapy teaches people to take responsibility for their own health as a way of coping with pain or other problems.

Cesar therapy

Cesar therapy involves exercises to improve your posture. The aim is to reduce back pain caused by poor posture.

endorphins

Endorphins are chemicals that the brain makes. They are the body's own painkillers.

infection

You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

blood clot

A blood clot forms when the cells in blood clump together. Sometimes this happens to stop you from bleeding if you've had an injury. But it can also happen on the inside of your blood vessels, even when you haven't had an injury. A blood clot inside a blood vessel is called a thrombus.

ulcer

An ulcer is an open sore. Ulcers can happen in many parts of your body, such as in your stomach, and the skin of your legs, mouth, or genitals.

anaesthetic

An anaesthetic is a chemical that blocks the ability to feel sensations like pain or heat. A local anaesthetic blocks the feeling in a specific area of the body. For example, your dentist uses a local anaesthetic like lignocaine in your gums so that you don't feel the pain of having a cavity filled. A general anaesthetic makes you completely unconscious and is usually used only in a carefully controlled environment like an operating room.

high blood pressure

Your blood pressure is considered to be high when it is above the accepted normal range. The usual limit for normal blood pressure is 140/90. If either the first (systolic) number is above 140 or the lower (diastolic) number is above 90, a person is considered to have high blood pressure. Doctors sometimes call high blood pressure 'hypertension'.

antibiotics

These medicines are used to help your immune system fight infection. There are a number of different types of antibiotics that work in different ways to get rid of bacteria, parasites, and other infectious agents. Antibiotics do not work against viruses.

Placebo effect

People who are ill sometimes improve even though they've been given an inactive treatment. This is called the placebo effect. We don't know exactly why it happens. It might be that expectations about treatment help you feel better, or even lead to physical changes in the body. It's also possible that seeing a doctor or other kind of therapist is reassuring, even if the treatment itself is inactive.

selective serotonin reuptake inhibitors

Selective serotonin reuptake inhibitors (SSRIs) are drugs that are used to treat depression. Serotonin is a chemical in your brain (called a neurotransmitter) that affects your mood. SSRIs increase levels of serotonin in your brain. This helps to improve your mood.

randomised controlled trials

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control

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group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

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