

Low Back Pain in Adults

About 3 in 4 people have one or more bouts of low back pain. Most bouts soon ease and are not due to serious back problems. In most cases the usual advice is to keep active, and do normal activities as much as possible. Painkillers are helpful until the pain eases. Chronic (persistent) pain develops in some cases, and further treatment may then be needed.

Understanding the lower back

Most of the lower back is made up from muscles that attach to, and surround, the spine. The spine is made up of many bones called vertebrae. The vertebrae are roughly circular and between each vertebra is a 'disc'. The discs are made of strong rubber-like tissue which allows the spine to be fairly flexible. Strong ligaments also attach to adjacent vertebrae to give extra support and strength to the spine. The various muscles that are attached to the spine enable the spine to bend and move in various ways.

The spinal cord, which contains the nerves that come from the brain, is protected by the spine. Nerves from the spinal cord come out from between the vertebrae to take and receive messages to various parts of the body.

What are the types of low back pain?

Simple low back pain

This is the most common type. About 19 in 20 cases of acute (sudden onset) low back pain are classed as 'simple low back pain'. (It is sometimes called 'non-specific' low back pain.) Simple low back pain means that the pain is not due to any underlying disease that can be found. In some cases the cause may be a sprain (an over-stretch) of a ligament or muscle. In other cases the cause may be a minor problem with a disc between two vertebrae, or a minor problem with a small 'facet' joint between two vertebrae. However, these causes of the pain are impossible to prove by tests and so it is often impossible for a doctor to say exactly where the pain is coming from, or exactly what is causing the pain.

Sometimes a pain may develop immediately after you lift something heavy, or after an awkward twisting movement. Sometimes you can just wake up with low back pain.

Simple does not mean that the pain is mild - the pain can range from mild to very bad. Typically, the pain is in one area of the lower back, but sometimes it spreads to the buttocks or thighs. The pain is usually eased by lying down flat, and is often made worse if you move your back, cough, or sneeze. So, simple back pain is 'mechanical' in the sense that it varies with posture or activity.

Most bouts of simple low back pain improve quickly, usually within a week or so. In about 3 in 4 cases, the pain has either gone or has greatly eased within four weeks. In about 9 in 10 cases the pain has gone or has greatly eased within six weeks. However, once the pain has gone it is common to have further bouts of pain (recurrences) from time to time in the future. Also, it is common to have minor pains 'on and off' for quite some time after an initial bad bout of pain. In a small number of cases the pain persists for several months or longer (chronic back pain).

Nerve root pain

This occurs in less than 1 in 20 cases. This means that a nerve coming from the spinal cord is irritated or pressed on. (This is often referred to as a 'trapped nerve'.) You feel pain along the course of the nerve. Therefore, you may feel pain down a leg to the calf or foot, and the pain in the leg or foot is often worse than the pain in the back. A common example is 'sciatica'. This is where a main nerve to the leg, the sciatic nerve, is irritated or pressed on.

Nerve root pain can range in severity from mild to very bad. Like with simple low back pain, nerve root pain is often eased by lying down flat, and is often made worse if you move your back, cough, or sneeze. The irritation or pressure on the nerve may also cause pins and needles, numbness or weakness in part of a buttock, leg or foot.

The cause of the irritation or pressure on a nerve may be due to inflammation caused by a ligament or muscle sprain. A 'slipped disc' is another well known cause. (A disc does not actually 'slip'. What happens is that part of the inner softer part of the disc bulges out (prolapses) through a weakness in the outer harder part of the disc. The prolapsed part of the disc can press on a nerve nearby. See separate leaflet called '*Prolapsed Disc*' for details.). Other less common conditions can press on a nerve to cause nerve root pain.

Less common causes of low back pain

Arthritis (inflammation of the joints) of the spine sometimes causes back pain. Osteoarthritis is the common form of arthritis and usually occurs in older people. Ankylosing spondylitis is another form of arthritis that can occur in young adults and causes pain and stiffness in the lower back. Rheumatoid arthritis may affect the spine, but you are likely to have other joints affected too. (There are separate leaflets on each of these types of arthritis.)

Various uncommon bone disorders, tumours, infections, and pressure from structures near to the spine occasionally cause back pain. (Less than 1 in 100 cases of low back pain.)

How can I tell what type of back pain I have?

Most cases of low back pain that develop suddenly (acutely) are due to simple low back pain. Many people just 'get on with it' and treat it themselves - and indeed most get better quickly. However, if in doubt, see your doctor for a check-over and advice.

As a general guide, if any of the following occur then it may indicate that it may not be simple low back pain, and there may be a more serious underlying cause such as a nerve root problem, or another disorder. Therefore, tell a doctor if you have any of the following.

- The pain first develops under the age of 20 years or over the age of 55 years.
- Constant back pain that is not eased by lying down or resting.
- Pain travels to the chest, or is higher in the back behind the chest.
- If the pain developed gradually, and slowly gets worse and worse over days or weeks. (Most cases of simple low back pain occur acutely, that is, suddenly.)
- In addition to back pain, you have:
 - Weakness of any muscles in a leg or foot.
 - Numbness (lack of feeling) in part or parts of a buttock, around the anus, or in a leg or foot.
 - Problems with your bladder or bowels such as not being able to pass urine or loss of control (incontinence).
 - Weight loss, fever, or if you feel generally unwell.
 - Recent history of violent trauma or injury to the back.
 - You have or have had a cancer of any part of the body.
 - You have taken steroid tablets for more than a few months.
 - If you have a poor immune system. For example, if you are on chemotherapy or have HIV/AIDS.
- If you are unsure about any symptom.

Cauda equina syndrome - rare, but an emergency

Cauda equina syndrome is a particularly serious type of nerve root problem. This is a rare disorder where the nerves at the very bottom of the spinal cord are pressed on. This syndrome can cause low back pain plus: problems with bowel and bladder function (usually unable to pass urine), numbness in the 'saddle' area (around the anus), and weakness in one or both legs. This syndrome needs urgent treatment to preserve the nerves to the bladder and bowel from becoming permanently damaged. See a doctor immediately if you develop these symptoms.

Do I need any tests?

Your doctor will normally be able to diagnose simple low back pain or nerve root pain from the description of the pain, and by examining you. In most cases, no tests are needed. For example, x-rays or scans of the back are not helpful and do not show anything abnormal if you have simple low back pain. Also, if you have sudden onset nerve root pain, and symptoms begin to settle over the next few weeks, then no tests are needed.

Tests such as x-rays or scans may be advised if nerve root pain persists or is severe, or if another serious cause of the pain is suspected.

What are the treatments for simple low back pain?

The following advice and treatment is commonly given for a sudden 'acute' bout of simple low back pain. Most people recover quickly.

Exercise and keep going

Continue with normal activities as far as possible. This may not be possible at first if the pain is very bad. However, move around as soon as possible, and get back into normal activities as soon as you are able. As a rule, don't do anything that causes a lot of pain. However, you will have to accept some discomfort when you are trying to keep active. Setting a new goal each day may be a good idea. For example, walking around the house on one day, a walk to the shops the next, etc.

In the past, advice had been to rest until the pain eases. It is now known that this was wrong. You are likely to recover more quickly and are less likely to develop chronic (persistent) back pain if you keep active when you have back pain rather than rest a lot. Also, sleep in the most naturally comfortable position on whatever is the most comfortable surface. (Advice given in the past used to be to sleep on a firm mattress. However, there is no evidence to say that a firm mattress is better than any other type of mattress for people with low back pain.)

Medication

If you need painkillers, it is best to take them regularly. This is better than taking them 'now and again' just when the pain is very bad. If you take them regularly the pain is more likely to be eased for much of the time and enable you to exercise and keep active.

- **Paracetamol** is often sufficient if you take it regularly at full strength. For an adult, this is 1000 mg (usually two 500 mg tablets), four times a day.
- **Anti-inflammatory painkillers.** Some people find that these work better than paracetamol. They include ibuprofen which you can buy at pharmacies or get on prescription. Other types such as diclofenac or naproxen need a prescription. Some people with asthma, high blood pressure, kidney failure, or heart failure may not be able to take anti-inflammatories.
- **A stronger painkiller** such as codeine is an option if anti-inflammatories do not suit or do not work well. Codeine is often taken in addition to paracetamol. Constipation is a common side-effect from codeine. This may make back pain worse if you need to strain to go to the toilet. To prevent constipation, have lots to drink and eat foods with plenty of fibre.
- **A muscle relaxant** such as diazepam is sometimes prescribed for a few days if the back muscles become very tense and make the pain worse.

Physical treatments

Some people visit a physiotherapist, chiropractor, or osteopath for manipulation and/or other physical treatments. It is debatable whether physical treatments would help all people with acute simple low back pain. However, physical treatments provide some short-term comfort and hasten recovery in some cases.

Other treatments

Treatment may vary, and the situation should be reviewed by a doctor if the pain becomes worse, or if the pain persists beyond 4-6 weeks, or if symptoms change. Other pain relieving techniques may be tried if the pain becomes chronic (persistent).

What are the treatments for back pain other than simple back pain?

Nerve root pain

In many cases, the treatment is the same as that described above for simple low back pain. Nerve root pain often eases and goes over a few weeks. Physical treatments such as spinal manipulation may provide some short-term comfort and hasten recovery in some cases. Some people with persistent back pain that is caused by prolapsed disc pressing on a nerve may benefit from an operation.

Other causes of back pain

Treatments depend on the underlying cause. For example, pain caused by types of arthritis may be treated by various anti-arthritis medicines.

Can further bouts of back pain be prevented?

Evidence suggests that the best way to prevent bouts of low back pain is simply to keep active, and to exercise regularly. This means general fitness exercise such as walking, running, swimming etc. There is no firm evidence to say that any particular 'back strengthening' exercises are more useful than simply keeping fit and active. It is also sensible to be 'back aware'. For example, do not lift objects when you are in an awkward twisting posture.

In summary - some points to remember

- Acute low back pain is usually not a serious condition - even if the pain is bad.
- Most people recover quickly - often within a week or so.
- Nerve root pains and 'slipped discs' are uncommon - and most of these get better by themselves anyway. More serious causes of back pain are even more uncommon. Surgery is only rarely needed.
- Stay as active as possible and return to normal activities as soon as possible, including work. People with back pain who get active, and back to normal activities as soon as possible (including work) are likely to recover more quickly and are less likely to develop chronic (persistent) back pain compared to those who rest and do little exercise.
- If the pain is very bad to start with you may have to rest in bed for a day or so - but get active as soon as possible. Bed rest does not promote recovery. You need to get your muscles going again rather than let them stiffen up by resting.
- You may have to put up with some pain whilst getting back to normal activities. With simple low back pain you will not do any 'damage' if you do normal activities or get back to work. On the contrary, you are less likely to develop long term problems.
- Painkillers taken regularly will ease pain whilst you are getting back to normal activities.
- See a doctor if the pain gets worse, or persists more than 4-6 weeks, or if you develop any worrying symptoms (which are listed above).

Further information and advice

Backcare (The National Back Pain Association)

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The Back Book

A reliable source of information. It is written by a team consisting of a GP, orthopaedic surgeon, physiotherapist, osteopath, and psychologist and provides comprehensive advice. *Roland, M.O et al. (2002) The back book. London: The Stationary Office.*