

Low Back Pain in Adults

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

Understanding the back

The spine is made up of many bones called vertebrae. These 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.

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.

Strong ligaments attach to the vertebrae. These give extra support and strength to the spine. Various muscles also surround, and are attached to, various parts of the spine.

(The muscles and most ligaments are not shown in the diagram for clarity.)

What are the causes of low back pain?

Simple 'mechanical' backache

This is the most common. About 19 in 20 cases of acute (sudden onset) back pain are classed as 'simple backache'. Simple does not mean that the pain is mild - the pain can range from mild to severe. Typically, the pain is in one area of the lower back, but sometimes it spreads to the buttocks or thighs.

The cause of most cases is thought to be a sprain or minor tear to a ligament or muscle. This may be caused by heavy lifting, an awkward twisting movement, or bad posture. Minor problems with the discs between the vertebrae, or the small 'facet' joints between the vertebrae, may also cause pain. Often, the exact site and cause of the pain is not clear.

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 compressed (trapped). The irritation may be due to inflammation from a ligament or muscle sprain. You feel pain along the course of the nerve. Therefore, you may feel pain down a leg to the calf or foot, and it 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 compressed.

Sometimes a 'slipped disc' is the cause of nerve root pain. A disc does not actually 'slip'. What happens is that the outer part of a disc can tear and part of the inner softer part of the disc bulges out. This can press on nearby structures such as a nerve.

Arthritis

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 a form of arthritis which 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.

Uncommon conditions

Various uncommon bone disorders, tumours, infections, and pressure from structures near to the spine occasionally cause back pain.

What are the symptoms of low back pain?

Pain can range from mild to severe. Simple backache and nerve root pain are typically eased by lying down flat, and are often made worse if you move your back, cough, or sneeze. Nerve root irritation may also cause pins and needles or numbness in part of a buttock or leg.

Most bouts of acute (sudden onset) back pain ease quickly, usually within a week or so. In about 3 out of 4 cases of acute back pain, the symptoms have either gone, or are very much eased, within 4 weeks. In about 9 out of 10 cases, the pain has gone or has eased within 6 weeks.

However, it is common to have further bouts of pain some time in the future. Also, it is common to have minor pains 'on and off' for quite some time after a severe bout of pain.

In a minority of cases, the symptoms persist for several months or longer (chronic back pain).

Back pain with any of the following symptoms may indicate a more serious problem, and you should tell a doctor if they occur.

- Weakness of any muscles in a leg or foot.
- Problems with your bladder or bowels.
- Weight loss, or if you feel generally unwell.
- Pain that develops gradually, and slowly gets worse. (Most back pains develop quite quickly.) Particularly if you have other conditions such as arthritis, AIDS, cancer, or take steroids.

What are the treatments for low back pain?

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

Exercise and keep going

Continue with normal activities as far as possible. This may not be possible at first if pain is severe. However, get back into normal activities as soon as you are able. As a rule, don't do anything which causes a lot of pain. But, 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.

Sleep in the most naturally comfortable position. Some people find a firm mattress to be the most comfortable.

In the past, advice had been to rest until the pain eases. It is now known that this was wrong. You are more likely to develop chronic (persistent) back pain if you rest rather than keep active.

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, it may prevent the pain from getting severe, 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** are an option if paracetamol is not helping. They reduce inflammation and ease pain. There are many different brands. So, if one does not suit, another may be fine. Side-effects sometimes occur with anti-inflammatory painkillers.
 - Stomach pain and bleeding from the stomach are the most serious side-effects. These are more of a risk if you are over 65 or have had a duodenal or stomach ulcer. Stop the medicine and consult a doctor if you develop stomach symptoms.
 - Some people with asthma, high blood pressure, kidney failure, and heart failure may not be able to take anti-inflammatory painkillers.
- **Stronger painkillers** such as codeine or dihydrocodeine are an option if anti-inflammatories do not suit or do not work well. These are often taken in addition to paracetamol. Constipation is a common side-effect from codeine and dihydrocodeine. 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 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 how well these treatments work. However, physical treatments may hasten recovery in some people, particularly if the onset of the pain was recent.

Other treatments

Treatment may vary, and the situation should be reviewed by a doctor if:

- the pain becomes worse
- the pain persists beyond 4-6 weeks
- symptoms change

Other pain relieving techniques may be tried if the pain becomes chronic. Some people with severe or chronic back pain which is caused by nerve compression may benefit from surgery.

Preventing back pain

After recovering from back pain, it is wise to try and prevent further bouts.

- **Exercise.** The aim is to get the supporting back muscles strong and supple. Swimming is good, but other regular back exercises will also help.
- **Posture.** Avoid standing or walking in a bent-forward position. Wherever possible, walk or stand with your shoulders and head slightly back. When you sit at a desk to work, make sure that the chair is at the right height for the desk. Your feet should be able to rest flat on the floor with your knees bent at 90 degrees. Sleeping on a bed with a firm mattress is thought to be best.

- **Lifting.** Do not bend your back when you lift. Bend at the knees, and keep your back straight. Do not lift with your back in an awkward twisting posture.
- **If you are overweight,** there is extra stress on the back, and losing weight will help.
- **Be 'back aware'.** It may not be heavy work that causes most bouts of back pain. More commonly it is due to bad posture or bad lifting techniques at work or home.

Further information and advice

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* [EMIS](#) and [PIP](#) 2003 Updated December 2003 [PRODIGY](#) Validated