

Non-specific Lower Back Pain in Adults

About 8 in 10 people have one or more bouts of low back pain. In most cases, it is not due to a serious disease or serious back problem, and the exact cause of the pain is not clear. This is called non-specific lower back pain. The usual advice is to keep active, and do normal activities as much as possible. Painkillers can help until the pain eases. In most cases, the pain clears within a week or so but may recur from time to time. Chronic (persistent) pain develops in some cases, and further treatment may then be needed.

Understanding the lower back

The lower back is also called the lumbosacral area of the back. It is the part of the back between the bottom of the ribs and the top of the legs.

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 between the vertebrae are a combination of a strong fibrous outer layer and a softer, gel like centre. The discs act as shock absorbers and allow the spine to be 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 nerve pathways to and 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?

Non-specific low back pain

This is the most common type of back pain. About 19 in 20 cases of acute (sudden onset) low back pain are classed as non-specific. This is the type of back pain that most people will have at some point in their life. It is called non-specific because it is usually not clear what is actually causing the pain. In other words, there is no specific problem or disease that can be identified as to the cause of the pain. The severity of the pain can vary from mild to severe. This type of back pain is discussed further below.

Nerve root pain - often called sciatica

This occurs in less than 1 in 20 cases of acute low back pain. Nerve root pain means that a nerve coming out from the spinal cord (the root of the nerve) is irritated or pressed on. (Many people call this a trapped nerve.) You feel pain along the course of the nerve. Therefore, you typically feel pain down a leg, sometimes as far as to the calf or foot. The pain in the leg or foot is often worse than the pain in the back. The irritation or pressure on the nerve may also cause pins and needles, numbness or weakness in part of a buttock, leg or foot.

About 9 in 10 cases of nerve root back pain are due to a prolapsed disc - often called a slipped disc. (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 (Slipped Disc)*' for details.) Other less common conditions can cause pressure on a nerve to cause nerve root pain.

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 suspect cauda equina syndrome.

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 low back pain. (Less than 1 in 100 cases of low back pain.)

The rest of this leaflet is mainly about non-specific low back pain - the common type of low back pain.

What is the cause of non-specific low back pain?

Non-specific low back pain means that the pain is not due to any specific or underlying disease that can be found. It is thought that 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. There may be other minor problems in the structures and tissues of the lower back that result in pain. However, these causes of the pain are impossible to prove by tests. Therefore, it is usually impossible for a doctor to say exactly where the pain is coming from, or exactly what is causing the pain.

To some people, not knowing the exact cause of the pain is unsettling. However, looked at another way, many people find it reassuring to know that the diagnosis is non-specific back pain which means there is no serious problem or disease of the back or spine.

What are the symptoms of non-specific low back pain?

Sometimes a pain may develop immediately after you lift something heavy, or after an awkward twisting movement. Sometimes it can develop for no apparent reason. Some people just wake up one day with low back pain.

Although non-specific back pain is sometimes called simple back pain, simple does not mean that the pain is mild. The severity of the pain can range from mild to severe. Typically, the pain is in one area of the lower back, but sometimes it spreads to one or both buttocks or thighs. The pain is usually eased by lying down flat. It is often made worse if you move your back, cough, or sneeze. So, non-specific low back pain is mechanical in the sense that it varies with posture or activity.

Most people with a bout of non-specific low back pain improve quickly, usually within a week or so, sometimes a bit longer. However, once the pain has eased or 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. This is called chronic back pain (discussed in more detail later).

How is non-specific back pain diagnosed?

Most people who develop low back pain that comes on suddenly (acutely) have non-specific low back pain. If there are no other associated symptoms and the pain is not too bad, many people are confident to 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.

A doctor will usually want to ask questions about your symptoms, and examine you. Basically, the symptoms are usually as described above, with no other worrying symptoms to suggest anything serious or another cause of back pain (such as the ones listed below). The examination by a doctor will not detect anything to suggest a more serious cause of back pain. Therefore, a doctor can usually be confident from his or her assessment that you have non-specific back pain.

As a general guide, if any of the following occur then it may not be non-specific low back pain, and there may be a more serious underlying cause. But note: the vast majority of people with low back pain do not have any of the following symptoms or features. They are included here for completeness, and as an aid to what to look out for and to tell your doctor should they occur.

- . Pain that develops gradually, and slowly gets worse and worse over days or weeks.
- . Constant back pain that is not eased by lying down or resting.
- . Pain that travels to the chest, or is higher in the back behind the chest.
- . Weakness of any muscles in a leg or foot.
- . Numbness (lack of feeling) in any part of your bottom or leg.
- . If you have taken steroid tablets for more than a few months.
- . Symptoms that may indicate an inflammatory (arthritis) cause such as ankylosing spondylitis. The main ones are:
 - o Pain which is worse in the second half of the night or after waking.
 - o Stiffness, in addition to pain, of the back muscles in the morning after getting up from bed that lasts more than 30 minutes.
 - o The pain is eased (and not made worse) by activity.
- . Symptoms that may indicate cauda equina syndrome. The main ones are, in addition to back pain:
 - o Numbness around the anus (the saddle area).
 - o Bladder symptoms such as loss of bladder sensation; loss of bladder control, incontinence, loss of sensation when passing urine.
 - o Incontinence of faeces.
- . Symptoms that may indicate a fracture in the spine The main ones are:
 - o Back pain following major trauma such as a road accident or fall from a height.
 - o Back pain following minor trauma in people with osteoporosis.
- . Symptoms that may indicate infection or spread of cancer affecting the spine. The main ones are:
 - o Onset of pain in a person over 50 years, or under 20 years, of age.
 - o Pain that remains when lying down; aching night-time pain disturbing sleep.
 - o Symptoms or problems in addition to pain such as:
 - o If you have or have had a cancer of any part of the body.
 - o General symptoms, such as fever, unexplained weight loss, etc.
 - o If you inject street drugs.
 - o If you have a poor immune system. For example, if you are on chemotherapy or have HIV/AIDS.

Do I need any tests?

Usually not. Your doctor will usually be able to diagnose non-specific low back pain from the description of the pain, and by examining you. Therefore, in most cases, no tests are needed. There is no test that can prove or confirm non-specific low back pain. In fact, some doctors argue that tests can actually do more harm than good when the diagnosis is non-specific low back pain. For example, the technical jargon used to report on some scans can sometimes sound alarming, when in fact the scan is just showing what would be normal for a given age and not a cause for pain.

Current UK guidelines are clear that routine tests such as X-rays and scans should not be done if the diagnosis is made of non-specific low back pain.

Tests such as X-rays or scans may be advised in certain situations. This is mainly if there are symptoms, or signs during a doctors examination, to suggest that there may be a serious underlying cause for the back pain.

What are the treatments for a bout of non-specific low back pain?

The following advice and treatment is commonly given for a sudden acute bout of non-specific low back pain.

Exercise and keep going

Continue with normal activities as much as possible. This may not be possible at first if the pain is very bad. However, move around as soon as you are able, and get back into normal activities as soon as you can. As a rule, don't do anything that causes a lot of pain. However, you will have

to accept some pain, to try 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.

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. Some people find that a small firm pillow between the knees when sleeping on the side helps to ease symptoms at night.

If you have a job, aim to get back to work as soon as possible. There is no need to wait for complete freedom from pain before returning to work. Returning to work often helps to relieve pain by getting back to a normal pattern of activity and providing a distraction from the pain.

In the past, advice had been to rest until the pain eases. It is now known that this was wrong. The evidence from research trials is that you are likely to recover more quickly by getting moving again, and getting back to work as soon as possible. Also, you are less likely to develop chronic (persistent) back pain if you keep active when you have back pain rather than rest a lot.

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 may not be able to take anti-inflammatories. For example, some people with asthma, high blood pressure, kidney failure, or heart failure.
- **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 occasionally prescribed for a few days if the back muscles become very tense and make the pain worse.

Other treatments

Heat such as a hot bath may help to ease pain.

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 is the outlook (prognosis)

Most of us (about 8 in 10 people) will have a bout of non-specific low back pain at some point in our life. The severity can vary. However, it is difficult to quote exact figures as to outlook. This is partly because it is so common and many people with back pain do not consult a doctor. Roughly, it is thought that:

- Most non-specific back pains ease and go quickly, usually within a week or so.
- In about 7 in 10 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 eased or 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. This is called chronic back pain.

Chronic (persistent) non-specific low back pain

Non-specific low back pain is classed as chronic (persistent) if it lasts longer than six weeks. In some people it lasts for months, or even years. Symptoms may be constant. However, the more usual pattern is where symptoms follow an irregular course. That is, reasonably long periods of mild or moderate pain may be interrupted by bouts of more severe pain.

What is the treatment for chronic non-specific low back pain

Initial treatment is similar to acute attacks. That is, aim to keep as active as possible. Also, painkillers can help. In addition to the painkillers listed above, your doctor may advise a course of an antidepressant medicine in the tricyclic group, for example, amitriptyline. Tricyclic antidepressants have other actions separate to their action on depression. They are used in a variety of painful conditions, including back pain.

Also, a national guideline (from NICE - referenced below) recommends one or more of the following treatments should be considered. Each of these treatments has some evidence from research trials to suggest that they will help to ease symptoms in some people (but not all):

- **Structured exercise programme.** This means a programme of exercise supervised by a professional such as a physiotherapist. This is likely to be in a group setting. Exercises may include aerobic activity, movement instruction, muscle strengthening, posture control and stretching. It typically consists of up to eight supervised sessions over 8-12 weeks with encouragement to keep on doing the exercises at home between sessions.
- **Manual therapy.** Typically this includes several sessions of massage, spinal mobilisation and/or spinal manipulation. With spinal mobilisation the therapist moves the joints of the spine around in their normal movement range. In spinal manipulation, the therapist moves joints beyond the usual range of movement.
- **A course of acupuncture.** It is not clear how this may work. (Some doctors feel that this is a controversial recommendation as the evidence for effectiveness is weak.)

Cognitive behaviour therapy (CBT) may also be recommended as a treatment option. There is good evidence from research trials that it can help. CBT aims to help you to change the way that you think, feel and behave. It is used as a treatment for various health problems including various types of chronic pain.

If the above treatments have not helped much then you may be referred to a specialist pain clinic. Rarely, a surgical operation called spinal fusion is considered when all other treatment options have not helped and pain remains constant and severe.

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 to prevent back pain 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.

Further information and advice

Backcare (The National Back Pain Association)

16 Elmtree Road, Teddington, Middlesex, TW11 8ST
Tel: 0845 130 2704 Web: www.backcare.org.uk

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.*

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- [Low back pain](#), NICE Clinical guideline (May 2009); *The acute management of patients with chronic (longer than 6 weeks) non-specific low back pain.*
- [European guidelines for the management of acute nonspecific low back pain in primary care](#), COST B13 Working Group (2004)
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Patient Information

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