



QUEENSLAND  
PHYSIOTHERAPY

# Lower Back Pain



## What is back pain?

Lower back pain (LBP) is a response of the brain to any potential strain, irritation, overload or injury to any of the structures in and around your lumbar spine or pelvis.

Your lumbar spine consists of bones (**vertebrae**) stacked on top of one another, separated by shock absorbent **discs**. Each vertebra is connected to the one above by a joint on either side, called **facet joints** (where your **nerves** exit the spinal cord), and an **intervertebral joint** in the middle. Each of these joints is secured with multiple **ligaments**. There are also small, **local muscles** that run from one vertebra to the next (often called your deep core muscles) and **larger muscles** that run all the way up the spine.

LBP usually involves dysfunction, irritation or sensitivity of multiple different structures of the back and nervous system (brain, spinal cord and nerves), which is why 85-90% of LBP is diagnosed as ‘non-specific low back pain.’

## Types of back pain

Lower back pain is usually classified into three groups:

- Acute LBP – lasts 6 weeks or less
- Subacute LBP – lasts 6 weeks to 3 months
- Chronic LBP – lasts longer than 3 months

Acute LBP comes on quickly and is usually more severe. It is more commonly brought on by a specific incident (e.g. bending down quickly, lifting something heavy, car accident) but can also come on randomly. Acute LBP usually responds very well to treatment and settles down quickly.

Chronic LBP is typically less severe but lasts longer. Usually it will have a slow, gradual onset without a specific injury. It can often be more complicated and will usually improve more slowly, particularly because people often put off seeking treatment and have reinforced poor movement patterns. Chronic LBP can flare up and down over time, and can present as multiple episodes of acute LBP.

## Causes of back pain

There are many different factors that contribute to LBP, and so there are many different possible causes. Some of these include:

- Over-stretching muscles or ligaments (e.g. dancing or gymnastics injuries)
- Weakness of deep core or glute muscles
- Excessive sitting or inactivity
- Poor posture or movement patterns
- Repetitive bending or twisting
- Over-loading specific joints (either in one incident or slowly over time)
- Incorrect form while exercising
- Tightness/stiffness in joints and muscles of the area

Most often, it will be combination of a number of different reasons as to why a person might develop LBP.



## Should I get a scan?

In the past, people with LBP were routinely referred for a CT or MRI scan to get an image of all the joints, bones, ligaments and nerves of the lumbar spine. However, recent research shows that most adults (with no pain at all) will have some disc bulging, joint degeneration, disc protrusion and/or other positive findings on a scan. On the other hand, a person might have severe LBP but the CT of their back appears completely normal. This means that when a person has back pain, scans are not often helpful in finding out why. Remember – pain is a response of the brain, and doesn't show up on an image of the spine.

In some cases, such as a back injury after a heavy fall or a car accident, an X-ray might be useful in identifying any possible fractures. A CT or MRI may be indicated if there are symptoms of nerve compression that are not improving with treatment.

## Red flags

The lower back is an area with lots of nerves and nerve endings, which means it can become very sensitive to pain. This means that a person can have a severely painful back without any structural damage or injury. Rather than focusing on severity of pain, some 'red flag' signs to watch out for include:

- Weakness/unsteadiness in legs
- Bladder/bowel dysfunction
- Sexual dysfunction
- Pins and needles, numbness or weakness of the leg that is getting worse over time, spreading or that is in both legs
- 'Saddle' numbness or tingling (of the groin, upper inner thighs and/or between the genitals and anus)
- Constant pain that does not get worse with movement or position changes

A person with these symptoms will usually require a referral to a doctor or specialist.

## What should you do?

### Keep moving and reassure yourself

Try to keep moving as much as you can, even if this is fairly minimal in the acute stages. Too much rest or inactivity is likely to make your back tighter and more sensitive to movement. Be mindful to not significantly aggravate your pain, but some discomfort with movement is to be expected. Try to reassure yourself that movement is not doing damage to your back, even if it's painful. Bending and twisting (especially repetitively) typically aggravate LBP and can be avoided in the initial, acute stages.

### Find active coping strategies

Lower back pain, especially chronic LBP, will commonly come and go over time so it's important that you have ongoing self-management to prevent flare ups and coping strategies to deal with them when they happen. Active strategies are things that you can do yourself (such as stretching, exercising, foam rolling or self-reassurance) and are the most effective methods for pain-management. Self-applied passive strategies such as heat or ice packs, pain relief medication (as directed by a doctor or pharmacist) or a home TENS machine can be very effective for settling acute LBP but shouldn't be relied upon for long-term management. Other passive options (things you can't do on your own, such as hands-on physio techniques or remedial massage) are also great for the initial stages of pain management but should be combined with or replaced by active strategies, especially for chronic LBP.

### Seek physiotherapy treatment

Physiotherapists are experts in back pain, and can help determine the factors contributing to your pain and develop a treatment plan. For acute LBP, this will usually involve some hands-on therapy to relieve your pain and get you moving, as well as some specific exercises or stretches that you might need. Chronic LBP responds best to exercise and strengthening, and your physio will give exercises suited to you. Some hands-on treatment might be helpful for improving movement or relieving flare ups of pain, but this is generally less of a focus for chronic pain.

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