



## Low back pain – OTC treatment options

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### Introduction

Low back pain is one of the most common musculoskeletal disorders seen by general practitioners. It is estimated that 80 percent of people have at least one episode of low back pain during their lifetime.<sup>1</sup> Pain can be mild or moderate to severe and debilitating.<sup>2</sup>

Low back pain usually involves muscle spasm of the supportive muscles along the spine. Also, pain, numbness and tingling in the buttocks or lower extremities can be related to the back.<sup>3</sup>

Low back pain can have many causes (see Table I), but most people have non-specific low back pain, which means that there is not a specific disease or abnormality in the spine that is causing the pain.<sup>1</sup>

### Red flags in low back pain

Although most patients with low back pain recover quickly with minimal or conservative treatment, it is important to identify those patients that require referral to the doctor (Table II).

### Treatment goals in low back pain

The goals of treatment for acute (sudden onset) low back pain are to relieve pain, improve function and reduce time away from work.<sup>2</sup> Optimising treatment may minimise the development of chronic (persistent) pain, which accounts for most of the healthcare costs associated with low back pain.<sup>2</sup>

Unless low back pain is caused by a serious medical condition, a rapid recovery is expected.<sup>1</sup> Most people with low back pain improve within four to six weeks without treatment or with simple measures that can be performed at home. It is not

**Table I.** Common causes of low back pain<sup>1,3</sup>

#### Muscle strain

- The muscles of the lower back provide the strength and mobility for all activities of daily living. Strains occur when a muscle is overworked or weak.

#### Ligament sprain

- Ligaments connect the vertebrae and provide stability for the lower back. They can be injured with a sudden forceful movement or prolonged stress.

#### Poor posture

- Poor posture, such as slouching in front of the TV or sitting hunched over a desk, creates muscle fatigue, joint compression and stresses the discs that cushion the vertebrae. Years of poor posture can cause muscular imbalances such as tightness and weakness, which also cause pain.

#### Age

- 'Wear and tear' may cause degenerative changes in the discs and in the facet joints of the spine leading to low back pain.

#### Disc bulge or herniation

- Can cause pressure on a nerve, which can radiate pain down a leg.

#### Other causes

- Other causes of low back pain include bladder or kidney infection and endometriosis.
- Psychological factors can also contribute to low back pain. These include depression, anxiety, stress, job dissatisfaction, boredom, tension, as well as how the body responds to everyday physical demands.

**Table II.** Red flags in lower back pain<sup>4</sup> – Refer the patient to the doctor

- Pain in patients < 20 years or > 55 years
- Pain not relieved by rest or changing position
- Pain unchanged despite two to four weeks of appropriate treatment
- Pain is the result of falling or an accident
- Pain spreads into the lower leg, particularly if accompanied by weakness of the leg
- History of cancer
- Patients who have suppressed immunity
- Patients who have other symptoms such as fever, malaise or weight loss
- Patients with a high risk of a fracture e.g. those with osteoporosis
- Patients with bladder or bowel disorders
- Patients who complain of severe morning stiffness
- Patients who find it difficult to walk

always necessary to consult the doctor for non-specific low back pain if pain is improving with conservative measures outlined below.<sup>1</sup>

### Non-drug management of low back pain

**Education** – The common message is that patients need to be reassured that they do not have a serious disease, that they should stay as active as possible and progressively increase their activity levels.<sup>5</sup> Treatment guidelines recommend avoidance of bed rest, exercise therapy and early return to work.<sup>4</sup> Using a heating pad can help with low back pain during the first few weeks.<sup>1</sup>

**Remaining active** – Many people with low back pain are afraid that they will hurt their back further or delay recovery by remaining active.<sup>1</sup> However, remaining active is good advice for those with non-specific low back pain.<sup>1</sup> In fact, bed rest is no longer a recommended treatment strategy for low back pain.<sup>1</sup> Studies have shown that people with low back pain recover faster when they remain active.<sup>1</sup> Movement helps to relieve muscle spasm and prevents loss of muscle strength.<sup>1</sup> Although high-impact activities and bending and twisting should be avoided, it is fine to continue doing regular day-to-day activities and light exercises, such as walking.

### Medical management of low back pain

Recommendations for the use of pain medications are generally consistent in treatment guidelines for low back pain.<sup>5</sup> If pain medication is needed, it is usually more effective to take a dose on a regular basis for three to five days, rather than only using the medicine when the pain becomes unbearable.<sup>1</sup>

**Paracetamol** – is often recommended as a first choice for the treatment of acute low back pain because of its good safety profile.<sup>5</sup>

**Nonsteroidal anti-inflammatory drugs (NSAIDs)** – may be used if paracetamol does not provide sufficient pain relief.<sup>5</sup> NSAIDs such as ibuprofen, naproxen and diclofenac are effective for short-term symptom relief.<sup>2</sup> There is no proof that one NSAID is better than another and switching to a different NSAID may be considered if the first NSAID is ineffective.<sup>2</sup> While the NSAIDs are usually well-tolerated when used short-term, they may cause gastrointestinal side-effects such as gastric and intestinal mucosal damage.<sup>6</sup> If an NSAID is used, it should be taken at the lowest effective dose for the shortest possible period of time.<sup>7</sup> Topical NSAIDs also provide good levels of pain relief in acute low back pain, probably similar to that provided by oral NSAIDs. Gel formulations and transdermal NSAID patches, provided the best effects. Adverse events were usually minimal.

**Skeletal muscle relaxants** – such as orphenadrine or methocarbamol are beneficial in the treatment of acute low back pain.<sup>2</sup> Most pain reduction from these medicines occurs in the first seven to 14 days, but the benefit may continue for up to four weeks.<sup>2</sup> The skeletal muscle relaxants may cause drowsiness but may be helpful before bedtime when used for a short time.<sup>1</sup>

**Other medicines** – such as analgesics containing codeine are sometimes used for acute low back pain if an NSAID is contraindicated, not tolerated or has been ineffective. However, there is little proof that codeine is more effective in acute low back pain than paracetamol or the NSAIDs and it is also associated with a higher side-effect burden.<sup>2</sup>

## The recommended treatment for acute low back pain includes the use of NSAIDs, paracetamol and skeletal muscle relaxants...

### In summary

Low back pain is a common global problem.<sup>8</sup> The recommended treatment for acute low back pain includes the use of NSAIDs, paracetamol and skeletal muscle relaxants in conjunction with non-drug management strategies, all of which should lead to improvement of symptoms in the majority of patients.<sup>8</sup> However, if these conservative treatment approaches do not provide adequate symptom relief, if pain persists or if patients have one or more red flag symptoms, the patient should be referred to the doctor.<sup>8</sup>

### Bibliography

1. Chou R. Patient information: Low back pain in adults (Beyond the Basics). Available from <https://www.uptodate.com/contents/low-back-pain-in-adults-beyond-the-basics>
2. Casazza BA. Diagnosis and treatment of acute low back pain. *Am Fam Physician* 2012;85(4):343-350.
3. University Health Services. Tang Centre. Low back pain. Available from <https://uhs.berkeley.edu/sites/default/files/LowBackPain.pdf>
4. Moosajee F, Kalla AA. Approach to lower back pain. *S Afr Med J* 2015;105(12):1-3.
5. Koes BW, van Tulder M, Lin C-W, C. An updated overview of clinical guidelines for the management of non-specific low back pain in primary care. *Eur Spine J* 2010;19:2075-2094.
6. Greeff OBW. The pharmacotherapy of low back pain. *S Afr Pharm J* 2016;83(5):18-22.
7. NICE Guideline. Low back pain and sciatica in over 16s: assessment and management. 2016. Available from [nice.org.uk/guidance/ng59](https://www.nice.org.uk/guidance/ng59).
8. Knezevic NN, Mandalia S, Raasch J, et al. Treatment of chronic low back pain – new approaches on the horizon. *J Pain Research* 2017;10:1111-1123.