**UPDATE**
**Module 1706**

**This module covers:**

- The incidence of lower back pain and the impact on sufferers, their families and society
- Diagnosis and classification
- Red-flag symptoms
- Management, including pharmacological, non-pharmacological and surgical measures

**June »**
**Musculoskeletal month**

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| Sprains and strains | June 7 |
| Osteoporosis | June 14 |
| Lower back pain | June 21 |
| Osteoarthritis | June 28* |

**Online-only for Update and Update Plus subscribers*

# Tackling lower back pain

**Asha Fowells**

Back pain is a health condition that most people will experience at some point in their lives. According to the charity BackCare, up to half the adult population will suffer from back pain at some point during any one year.

This can have a significant impact on the sufferer, reducing their quality of life and having a detrimental effect on their relationships with family and friends. If the problem persists, it can also affect their employment status and increase their chance of developing other medical conditions, such as depression.

The costs don't stop there. According to a report published by Nice to accompany its clinical guidelines on lower back pain, treating all types of back pain costs the NHS more than £1 billion a year. The document states that, in 1998, the direct healthcare costs of all back pain ailments in the UK were estimated at £1.6bn, with the NHS bearing more than £1bn and the rest being picked up by the private sector.

Furthermore, society as a whole pays a hefty price for the widespread prevalence of back pain. In 2003-04, nearly 5 million working days were lost as a result of the condition, according to BackCare. This equates to 1 per cent of the working population being on sick leave due to a problem with their back on any given day. Among manual labourers, back pain is the top reason for long-term sickness.

## Symptoms and diagnosis

While the main symptom of lower back pain is – unsurprisingly – pain in the lower back, it is worth remembering, particularly during diagnosis, that sufferers may describe their back as feeling sore, stiff or tense rather than painful. The discomfort may be restricted to the lower back, but it may also radiate to the side or front of the body or be felt down the leg. This Update module deals specifically with lower back pain: in other words, that affecting the lumbosacral area that is located

**Lower back pain is normally classified as acute or chronic; most patients experience acute back pain**

between the bottom of the ribs and the top of the legs.

There are risk factors that increase someone's chance of developing lower back pain. These include: the extra pressure placed on the spine caused by being overweight or heavily pregnant; long-term use of medication that is known to weaken bones, such as corticosteroids; and suffering from certain conditions, such as depression.

Lower back pain is usually classified as acute or chronic. Acute cases last less than six weeks, chronic cases for longer. The vast majority of patients experience acute rather than chronic back pain, although many will suffer recurrences. Among those who experience chronic lower back pain, most are able to continue working and lead largely normal lives. The condition may be further differentiated as follows:

- **Inflammatory lower back pain** is often described as stiffness and is exacerbated by rest. It may disturb sleep during the second half of the night, and can last up to an hour after getting up in the morning. Typically, it is caused by rheumatic conditions such as arthritis and ankylosing spondylitis. Anti-inflammatories and simply moving around are usually effective.
- **Mechanical lower back pain** is brought on by movement or posture. For example, some may complain their back hurts more when standing and is eased by sitting or lying down, whereas others may find sitting more troublesome but gain relief on standing up. Causes can include injury, such as a vertebral fracture, and sciatica (compression of the sciatic nerve, most commonly as a result of a slipped disc).
- **Non-specific lower back pain** is anything that does not fit into either of the above categories, in that no cause is apparent or the issue has continued even after the original problem (such as a slipped disc) has resolved. As such, it is often thought of as a symptom rather than a condition in itself.

Taking a history from the patient (including when and how the problem started, any past issues with the back and any measures that seem to ease the pain) and conducting a brief, but focused, clinical examination are all that are usually necessary when diagnosing lower back pain.

X-rays are rarely necessary, mainly because lower back pain is usually due to an issue with soft tissue such as ligaments or muscles, which are not picked up by this technique. An x-ray can also be unhelpful as it will pick up wear and tear to the bones and joints in the back, which may be unrelated to the symptoms and confusing diagnostically.

Other tests, such as magnetic resonance imaging (MRI) or a computerised tomography (CT) scan are generally used only if there is a red-flag symptom (see *Red-flag symptoms*, p16) or an inflammatory condition or injury is suspected.

## Management

Acute lower back pain can be managed using self-care measures, such as over-the-counter painkillers, hot or cold treatments, changing sleeping position to maintain the normal curve of the back (a pillow placed between slightly drawn-up legs is a good option for side-sleepers; those who sleep on their back may benefit from a pillow under the knees), practising relaxation techniques and keeping active rather than lying in bed.

Pharmacists have an obvious role to play in explaining the measures that might be beneficial and offering lifestyle advice on preventing future back problems. These include the importance of maintaining a healthy body mass index (BMI), reducing stress levels, taking regular exercise, wearing sensible footwear, sitting correctly (whether at a desk or when driving), and lifting and carrying safely.

Pharmacists also have an important job in encouraging patients to take control of their back pain. This can be done by addressing any fears sufferers might have about their condition, encouraging positive thinking, recognising and reinforcing progress, and being alert for signs of depression.

Much of the same advice can be provided to those suffering from chronic lower back pain, including the need to stay physically active. Paracetamol should be tried first-line, with NSAIDs and/or weak opioids tried if it proves ineffective. Short-term stronger opioids may be offered for people who are in severe pain. However, if there is no sign of the problem resolving, such patients should be referred for specialist assessment.

A short-term benzodiazepine such as diazepam is an option for anyone who is suffering discomfort due to spasm of the paraspinal muscles. Tricyclic antidepressants (TCAs) have a place if other medication does not provide adequate pain relief: these should be started at a low dose and then increased until a therapeutic effect is felt, side-effects become unacceptable or the maximum dosage is reached. Selective serotonin re-uptake inhibitors (SSRIs) should not be prescribed as an alternative to TCAs. Gabapentin or pregabalin are sometimes used in sciatica because of their effect on neuropathic pain.

Pharmacists should be aware that not all drugs in the classes listed above are licensed for use in the treatment of back pain; as such, they should check for any restrictions when recommending or dispensing products.

Nice recommends offering up to nine sessions of manual therapy over a period of up to 12 weeks. This can include spinal manipulation (moving the joint beyond the normal range of movement), spinal mobilisation (moving the joint within the ▸

normal range of motion) and massage (the manipulation of soft tissue). Mobilisation and massage are practised by a wide range of practitioners, with manipulation the domain of chiropractors and osteopaths, as well as physiotherapists and doctors who have undertaken specialist postgraduate training.

Laser and interferential therapy (in which a device is used to pass an electrical current through the back to try to accelerate healing while stimulating endorphin production), TENS (transcutaneous electrical nerve stimulation), ultrasound, lumbar supports and traction should not be offered, Nice states. Acupuncture has been shown to be of some benefit, with Nice recommending that patients are offered a course of up to 10 sessions over three months, although back injections are not advised.

Patients suffering from high levels of disability or significant psychological distress should be referred to a programme combining exercise with psychological treatments, such as cognitive behavioural therapy. Occupational therapy also has a role, but patients must not come to rely on modifications or gadgets to the point that they lose the ambition to get back to their usual way of doing things.

Surgery should be considered only for people who continue to suffer severe non-specific lower back pain despite trying everything else, including a combined exercise and therapy programme. The only procedure recommended by Nice is spinal fusion, although a discectomy may be performed if the back pain is due to a prolapsed disc.

## Further information

- The website of the Chartered Society of Physiotherapy has a section on the role of physiotherapy in back pain at csp.org.uk/your-health/conditions/back-pain
- There is also information on the British Pain Society's website at britishpainsociety.org/patient_faq.htm
- Information on the effectiveness of acupuncture in back pain can be obtained from the British Acupuncture Council at acupuncture.org.uk/a-to-z-of-conditions/back-pain.html
- Exercises that can be beneficial in back pain can be seen on the website of Arthritis Research UK at arthritisresearchuk.org/arthritis-information/conditions/back-pain/back-pain-exercises.aspx

## References


- BackCare. *Facts and figures about back pain*: backcare.org.uk/factsandfigures
- Nice. *The costing report of low back pain*: nice.org.uk/nicemedia/pdf/CG88CostReport.pdf
- NHS Choices: nhs.uk/Conditions/Back-pain/Pages/Introduction.aspx
- BUPA health information: bupa.co.uk/individuals/health-information/directory/b/backpain
- Clinical Knowledge Summaries: cks.nice.org.uk/back-pain-low-without-radiculopathy
- Nice CG88. *Early management of persistent non-specific low back pain* (May 2009): guidance.nice.org.uk/CG88


### *Red-flag symptoms*

There are several serious conditions that may feature lower back pain as a presenting symptom. There are some features that are considered red flags, as they indicate that something other than the norm may be going on, and that further investigation is warranted. These are:

- fever
- unexplained weight loss
- bladder or bowel incontinence
- pain in more than one area of the spine
- numbness or weakness in one of both legs or around the buttocks
- apparent deformity of the spine
- recent trauma, such as a particularly nasty fall
- an area of swelling
- constant pain not relieved by usual measures, such as non-steroidal anti-inflammatory drugs (NSAIDs) or changing posture, or that continues at night.

Certain patient groups also warrant urgent referral, namely:

- anyone younger than 20 or older than 50 who has had recent onset
- anyone who has been diagnosed with a suppressed immune system
- recreational intravenous drug users
- those with a history of cancer
- anyone with a recent bacterial infection, such as a urinary tract infection.

Some of the more serious differential diagnoses of lower back pain are:

- malignancy, such as secondary deposits in the bone or myeloma
- spinal fracture
- dissecting aortic aneurysm
- cauda equina syndrome (compression of the bundle of spinal nerves and nerve roots that are responsible for the functioning of the pelvic organs and lower limbs)
- osteomyelitis (inflammation of the bone or bone marrow due to infection)
- epidural abscess
- Paget's disease (a disorder in which the bones break down and reform in a disorganised manner, leaving them weak, misshapen and prone to arthritis and fractures as a result)
- osteomalacia (bone softening, either due to overactive resorption of calcium from the bones or because of poor bone mineralisation as a result of inadequate amounts of phosphorous or calcium in the body).

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**5 minute test**

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## Take the 5 Minute Test

1. Up to half the adult population will suffer from back pain at some point during any one year.
**True or false?**
2. Acute back pain is classed as that lasting less than three weeks.
**True or false?**
3. Mechanical lower back pain is often described as stiffness and is exacerbated by rest.
**True or false?**
4. Inflammatory lower back pain is typically caused by conditions such as arthritis and ankylosing spondylitis.
**True or false?**
5. X-rays are often useful in diagnosing lower back pain.
**True or false?**
6. Paracetamol should be tried first-line for relief of lower back pain.
**True or false?**
7. Selective serotonin re-uptake inhibitors (SSRIs) can be used for lower back pain if other medication does not provide adequate relief.
**True or false?**
8. Nice recommends offering manual therapy sessions for lower back pain management.
**True or false?**
9. Acupuncture has been shown to be of some benefit in relieving lower back pain.
**True or false?**
10. The only surgical procedure for lower back pain recommended by Nice is intradiscal electrothermal therapy.
**True or false?**

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## Tips for your CPD entry on lower back pain

*Reflect* **After how long is back pain considered to be chronic? When should patients with lower back pain be referred? What does Nice recommend for treating lower back pain?**

*Plan* **This article contains information for pharmacists about lower back pain including incidence and impact, diagnosis and red-flag symptoms. Management of acute and chronic lower back pain with pharmacological, non-pharmacological and surgical measures is also discussed.**

*Act* **Read the Update article and the suggested reading (below), then take the 5 Minute Test (above). Update and Update Plus subscribers can then access answers and a pre-filled CPD logsheet at chemistanddruggist.co.uk/mycpd.**

**Read more about back pain on the BackCare website, which also includes information about the anatomy of the back and causes of back pain**
tinyurl.com/backpain11

**Find out more about the treatment of lower back pain from NHS Choices**
tinyurl.com/backpain12

**Read the advice about preventing back pain with good back care and physical activity on the BackCare website**
tinyurl.com/backpain13

**Find out about exercises for back pain from the NHS Choices website and the Arthritis Research UK website**
tinyurl.com/backpain14
tinyurl.com/backpain16

**Find out about practitioners in your area that can provide therapies such as massage, spinal manipulation and spinal mobilisation**

*Evaluate*
**Are you now confident in your knowledge of lower back pain and the problems it causes? Could you recommend and discuss treatments with patients?**

### ASK THE EXPERT

June is musculoskeletal month and our expert is on hand to answer your queries. Send in your questions by email to **pooja.sisodia@ubm.com**