

Management of **non-specific back pain** and **lumbar radicular pain**

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HAVING EXCLUDED serious pathology, the aim of management is to reduce distress and encourage return to activity, by addressing the patient's fears, educating about back pain and providing adequate analgesia.^{1,2}

Address fears

Patients' beliefs and attitudes warrant as much attention early on as the anatomical and pathological aspects of their condition. Fear about pain can be more disabling than pain itself and is a major determinant of disability and possible chronicity.³

It is helpful to encourage the patient to reflect on their emotions and concerns. Open questions following the standard "FIFE" format are useful:

- Feelings: What are your concerns?
- Ideas: What do you understand is the cause of your back pain?
- Function: How is it affecting you?
- Expectations: What do you think is needed to help?

The following factors (yellow flags) can be associated with poor prognosis for back pain:

- Belief that back pain is harmful and potentially severely disabling; "I hurt", "I can't move", "I can't work" and "I'm scared"
- Avoiding behaviours for fear of damaging the back
- Past history of chronic pain, somatisation and preoccupation with health
- Negative attitudes and outlook and a tendency towards lowered mood and withdrawal from social activity
- Expectation that passive treatments will help more than active participation

Provide reassurance

Offer a biological model of the pain, for e.g.; "It's like an ankle sprain, you have probably strained muscles or ligaments, perhaps involving a disc, that won't show on x-ray. It will take a few days or weeks to heal, but you can gradually get back to normal activities as soon as you are able."⁴

Encourage people with acute low back pain to stay in work if possible⁵

Although back pain may be precipitated by factors at work only a small proportion of cases are actually caused by work. Most people with back pain continue to work most of the time. Continuing to work, provided it does not require extended periods of immobility, speeds recovery and reduces recurrences.

Encourage people with acute low back pain to stay in work if possible. Consider suggesting work adjustments rather than signing the patient off work. If sick leave is unavoidable, make it short-term and review progress regularly. Patients initially unfit for work should be advised to return as soon as possible and not to wait until they are pain free

The key messages that need to be conveyed to the patient as part of the reassurance process are:

- There is no sign of any serious disease as red flags were excluded on history and examination.
- Most acute low back pain does get better:
 - Non-specific back pain may take some time to settle, even up to a couple of months. It is not unusual to experience “flare-ups” but this doesn’t mean there is anything wrong. Over time most people have a complete recovery.
 - With lumbar radicular pain expect a dramatic reduction in severity of pain with simple analgesics and keeping active. 90% of patients with radicular pain, associated with a lumbar disc, will start to improve within six weeks and be free of leg pain at twelve weeks.⁶
- There is no need for x-rays initially as the majority of causes for acute low back pain are due to functional disturbance of the non-bony structures that do not show on x-ray. If the pain is not improving with conservative treatment over four to six weeks, radiological investigations may then be appropriate.
- If movement causes pain this does not indicate ongoing damage. Light activity will not harm the spine. Increased muscle tension and spasm can increase the pain and this can be relieved with simple stretching and mobilising the lumbar spine with light activity.

Provide advice about activity

Provide clear explanations about why exercise and activity is both safe and recommended. Encourage the patient to stay active despite pain rather than waiting for the pain to settle completely.⁷ They should continue normal daily activities, including work if possible, and avoid bed rest as this delays recovery.

Practical tips:

- Teach some simple stretching techniques
- Advise walking as normally as possible and suggest

gradually increasing activity such as walking or swimming on a daily basis aiming for 30 minutes a day

- Refer early to physiotherapy⁸
- Reinforce recommendations with a green prescription

Prescribe adequate analgesia

Adequate analgesia from day one helps mobilisation. It does not cure the problem.

It is often appropriate to start with:

- Paracetamol 1 g four times daily
- Plus a NSAID, such as ibuprofen 400 mg four times daily (+/- gastro-protection e.g. omeprazole 20 mg)

NSAIDs have a small short-term effect on acute low back pain without radicular pain.⁹

If the above treatments do not provide adequate pain relief add:

- A weak opioid such as codeine (30–60 mg 4 hourly) or tramadol (50 mg 6 hourly) plus laxatives

There is conflicting evidence that muscle relaxants (e.g. diazepam, orphenadrine) are effective in acute low back pain. Adverse effects of muscle relaxants include drowsiness, dizziness and dependence. These effects usually outweigh any benefit and therefore muscle relaxants are no longer routinely recommended.¹⁰

Tricyclic antidepressants have a place in the treatment of chronic pain but are not recommended for the treatment of acute low back pain.¹¹

Alternative therapies

Local heat therapy is more effective than paracetamol or NSAIDs in the first 48 hours. Manipulation may provide some short-term improvement in pain, activity levels and patient satisfaction.¹² Massage may provide short term relief.

The role of manipulation

Spinal manipulation is safe in the majority of cases of back pain¹³ including neurogenic pain from disc herniation.¹⁴ However there are rare serious complications associated with nearby vessels and nerves.^{15, 16} The risks are higher with cervical spine manipulation and when a serious underlying disease or structural abnormality has not been diagnosed.

Spinal manipulation should be avoided or used with caution in the following conditions; acute fracture, dislocation, ligamentous rupture, instability, tumour, infection, acute myelopathy, cauda equina syndrome, spondylolisthesis, recent surgery, acute soft tissue injury, osteoporosis, ankylosing spondylitis, rheumatoid arthritis, anticoagulant therapy and bleeding dyscrasias.

An improvement should be noticed, even if only transient, after one treatment. If the patient is no better after three treatments, they should stop.

Review regularly

Each review is an opportunity to continue to develop a relationship with the patient, reinforce their active participation, monitor progress, and check for any emerging red flags. At each visit:

- Check for red flags and review any change in neurology; any deterioration should trigger urgent investigation or referral
- Reassess the patients ideas, the impact of the back pain, their concerns and expectations
- Review exercise and medication
- Reinforce previous explanations and advice

At four to six weeks

If the pain is not resolving or if the patient has not returned to normal activities, carefully reassess for red flags to exclude serious pathology and investigate as indicated. Re-assess yellow flags and address beliefs or behaviours that may be delaying recovery. A short course of manipulation may help (if not already tried).¹⁷

It is appropriate to refer for assessment (ACC GPSI programme or specialist) to help prevent long term problems and chronic back pain.³ At this stage MRI is indicated, if neurogenic pain is not beginning to settle with simple analgesics and encouragement to resume daily activities, and if surgery is being contemplated.

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