

Patient-centred, pragmatic prescribing for acute non-specific low back pain

Managing acute non-specific low back pain can be a challenging experience for healthcare professionals.

On one side, acute non-specific low back pain is a self-limiting condition that for most patients resolves after 4–6 weeks with simple non-pharmacological treatments as part of first-line therapy.^{1–4}

Guidelines recommend simple treatments for first-line therapy. These include:

- ▶ providing education about the nature of low back pain
- ▶ reassuring patients about the likelihood of a positive prognosis³
- ▶ encouraging self-management strategies such as heat packs, and
- ▶ most importantly,⁵ advising patients to stay active.

Staying active involves continuing to do normal daily physical activities as much as possible, including work.^{4,6,7}

On the other side, recent evidence shows that paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs) and opioids have little or no effect on this kind of pain^{8–11} (see Table 1 for more details). However most patients overestimate the benefits of these medicines⁷ and expect to receive immediate effective pain relief from them.



Dr Symon McCallum

So how can a healthcare professional deal with these high expectations of medicines?

Dr Symon McCallum, a pain specialist who works closely with GPs in private practice in Victoria and Tasmania, says in his experience a patient-centred and pragmatic approach is the most effective way to address the challenge.

Even though it may be difficult for patients to accept, healthcare professionals need to explain the limitations of medicines for acute non-specific low back pain, he says.

‘I often say to patients these medicines are commonly called pain killers, where in fact they’re not. They are pain decrease-a-bit-ers. There is no medicine out there that is going to make you pain free. A win is a decrease in pain by a third’, says Dr McCallum.

So it’s a question of, at some stage, telling the patient ‘you’ve got to stop searching for that tablet that will make you pain free and start putting your energies in a different direction’.

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That direction involves a broad approach to the management of acute non-specific low back pain where the evidence shows that the focus of effective pain relief is on non-pharmacological treatments, rather than medicines.^{4,12,13}

Definitions

Non-specific low back pain

Where a clear cause of low back pain can’t be found, although it’s known not to be caused by a serious spinal or neurological pathology (such as cancer, infection, cauda equina syndrome, spinal stenosis, radiculopathy, vertebral compression fracture or ankylosing spondylitis).¹⁴

Acute low back pain

Pain present for less than 4 weeks, sometimes grouped with sub-acute low back pain as pain present for less than 3 months.¹⁵

Supporting role for medicines

Guidelines recommend that medicines, despite their underwhelming efficacy, can play a supporting role in the management of acute non-specific low back pain.^{4,12,13}

This involves ensuring that first-line non-pharmacological therapy has been implemented before considering medicines. And if medicines are required, the aim of taking them should be to reduce pain, rather than to completely stop it, so that the patient can maintain function and stay active.⁴

‘I say to patients to just take your medicines when you know it’s hurting or when you know you’re going to do some activity that’s going to hurt. That’s a much more appropriate way of taking medicines rather than routinely taking them’, says Dr McCallum.

Geoff, a 64-year-old retired management consultant from Perth, says he finds his GP’s advice on medicines helpful when he has an episode of acute low back pain.

‘There’s an acknowledgement that there’s nothing wrong with taking them, but it needs to be controlled, which means short doses and according to need, particularly to help me do activities that I like such as play golf. It helps to keep my pain manageable, though it hasn’t helped my golf score,’ he says with a laugh.

‘With that advice, my expectation of the impact of a medication is for pain to be reduced, though not completely gone. I realise it’s not a cure, it’s just a support.’

Geoff, a patient with low back pain

Put the patient in the centre

The pinnacle of patient-centred care is shared decision making.¹⁵ It involves familiarising patients with the treatment options available, including their advantages and disadvantages, and helping them to explore their preferences to inform their final decisions.¹⁶

The philosophy behind shared decision making is that patients will have more autonomy in decisions about their personal health if the doctor-patient relationship shifts from paternalistic to a more equal relationship.¹⁷

But while it's based on each patient's right to make decisions about their own health, shared decision making is a continuum. The amount of information provided and responsibility for decision making can vary according to the context in which the decision is occurring.¹⁸

With medicines for acute non-specific low back pain, for example, less detailed discussion is required when choosing between paracetamol or an NSAID if the medicine is going to be taken short term by a low-risk patient, than is needed if an opioid is being considered.

Including a physical examination as part of the consultation can be reassuring for patients, even when no specific findings are made, and also centres the patient, says Dr McCallum.

'I recall a patient, where I had finished taking his history and I said to him "right, now let's look at you". He said, "you're the first person to do that in two years." I thought, "oh my god" and it really stuck with me.'

'Patients often come to see you because the pain is incredible, they've not slept for three or four nights, they're worried, thinking "has a disc slipped or something like that?" It's reassurance about what it's not, rather than what it is, that they want,' he says.

The physical examination helps because once you've laid the foundation of the diagnosis, the patient is more likely to be receptive to any advice you may give about medicines, including to stop taking them and focus on staying active.

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Pragmatic prescribing

Being pragmatic helps to put the evidence and guideline recommendations on medicines into practice in a realistic manner, says Dr McCallum.

'The reality is that patients with acute non-specific low back pain are usually already taking an over-the-counter medicine on their own initiative when they first see a GP,' he says.

'The first thing I ask the patient is "are these medicines helping your pain?" If they are, sure there are studies that say paracetamol doesn't help with low back pain. But if a patient says it helps, then crack on, continue taking it, I'm not going to tell them that they're wrong.'

Of course, at the same time, GPs need to ensure that patients aren't causing themselves harm, says Dr McCallum. 'So the second thing I ask is "are they taking too much paracetamol

or ibuprofen?" If you've got a 50-year-old patient, for example, and he's taking 400 mg of ibuprofen three times a day for two weeks and starting to get a bit of stomach pain, then I say, "you have to take it less, have some days off".'

It's also essential to check for contraindications. 'If you've got someone with acute non-specific low back pain, whatever you do or don't do, it's probably going to get significantly better in a period of weeks,' says Dr McCallum.

'Exposing a patient to a risk of a GI bleed or a stroke when taking an NSAID is not acceptable. You can just keep it simple and instead prescribe them paracetamol or recommend they trial not taking a medicine at all,' he says.

Snakes and ladders

In 2015 the first studies reported that medicines for acute non-specific low back pain have little or no effect.⁸⁻¹¹ Before these findings, guidelines endorsed the World Health Organisation (WHO) analgesic ladder.³

However, if the patient answers 'no' to the question 'are these medicines helping your pain?', Dr McCallum's advice is more like the children's game of Snakes and Ladders than like climbing the analgesic ladder.

'The analgesic ladder had you taking paracetamol and building on it with second- and third-line medicines. But because we know from the evidence that these medicines aren't very good, if a medicine is not helping, there's no need to continue taking it,' says Dr McCallum.

If a patient says "I'm not sure the medicine is helping" then it's probably not. Because if a medicine helps, it should be obviously helping.

Dr Symon McCallum

'My advice to this patient is to stop taking it and see if the pain gets worse. If it doesn't, then clearly it wasn't helping in the first place.' In other words, rather than going further up the ladder, go back down the snake.

Which medicine?

The 2017 Therapeutic Guidelines (TG) for low back pain recommend that if a medicine is required, an oral NSAID should be trialled first, after ensuring the potential benefits have been weighed against potential harm.⁴

If NSAIDs are contraindicated or not tolerated, the guidelines state that even though paracetamol is ineffective, individual patients may experience a benefit and, because of its favourable safety profile, a trial of paracetamol may be considered.⁴

But how can an ineffective medicine have a benefit?

Dr McCallum says one explanation is that efficacy statistics are based on population data which includes those who respond well and those who don't. A small improvement in pain may not be statistically significant, but may be appreciated by patients, particularly those with intolerable pain.

'Statistics that come from a population should be treated in a different context to the response a patient has to a treatment. The most important factor is the patient in front of you and not the population averages,' he says. Dr McCallum says another

possible explanation for the benefit is that the evidence shows paracetamol has no benefit compared to placebo. It's possible that a patient with acute non-specific low back pain may experience a benefit that is due to the placebo effect.

The 2017 TG for low back pain also recommend that opioids may be considered for patients with severe pain that is not adequately relieved with other measures and is interfering with their ability to function.¹⁹

Whichever medicine is prescribed, it should be at the lowest effective dose for the shortest time. In addition, clear stopping goals should be established with the patient and timely review is essential to assess individual benefits and harm of the medicine, as well as progress towards satisfactory recovery.^{7,13,19}

When assessing recovery, however, the limited effectiveness of medicines and the impact of simple non-pharmacological treatments as part of first-line therapy should be kept in mind and given due acknowledgement. This can help ensure that expectations of medicines are not too high.

TABLE 1 EVIDENCE ON MEDICINES

MEDICINE	BENEFITS	HARM
Paracetamol	No more effective than placebo for reducing pain in the short term (n = 1652, high quality evidence). ⁸	Dose-response findings in the general adult population for mortality, and cardiovascular, gastrointestinal and renal adverse events, suggest a considerable degree of paracetamol toxicity especially at the upper end of standard analgesic doses. ²⁰
NSAIDs	Effective at reducing pain, by only 6.4 points on a 100-point scale (n = 814, high quality evidence) where at least 10 points is what patients regard as meaningful or important. ⁹	Short-term use at any dose for 1-7 days vs non-use is associated with increased risk of acute myocardial infarction; OR 95% CI 1.24 celecoxib, 1.48 ibuprofen, 1.50 diclofenac, 1.53 naproxen, 1.58 rofecoxib (n = 446,73). ²¹ NSAIDs (not including COX-2 selective) compared to placebo are associated with more gastrointestinal adverse effects, dizziness, headache, oedema, rash, tinnitus and pruritus; RR 1.35 (moderate quality, 10 RCTs). ²²
Opioids	Have not been investigated in RCTs for acute non-specific low back pain. Trials for chronic low back pain found they reduce pain by 10.1 points on a 100-point scale (n = 3419, moderate quality evidence) for a single ingredient and short-term pain. ¹⁰	Adverse effects with short-term use for chronic pain include nausea, dizziness, constipation, vomiting, somnolence, and dry mouth. ²² Longer-term use is also associated with dependency, misuse, addiction, overdose and mortality. ²³
Muscle relaxants	Benzodiazepines, among the most commonly prescribed medicines for low back pain, are no more effective than placebo. Muscle relaxants (that are not available in Australia) ²⁴ reduce pain by 21.3 points on a 100-point scale (n = 496, high quality evidence). ^{11,24}	When benzodiazepines were compared to placebo, central nervous system adverse effects were found more likely, including somnolence, fatigue, light-headedness, addiction, abuse, overdose and fractures. ²²

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