



## PRACTICE

## GUIDELINES

# Low back pain and sciatica: summary of NICE guidance

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Low back pain is the leading cause of long term disability worldwide.<sup>1</sup> The lifetime incidence of low back pain is 58-84%,<sup>2</sup> and 11% of men and 16% of women have chronic low back pain.<sup>3</sup> Back pain accounts for 7% of GP consultations and results in the loss of 4.1 million working days a year.<sup>2</sup> More than 30% of people still have clinically significant symptoms after a year after onset of sciatica.<sup>4</sup>

This guideline replaces the National Institute for Health and Care Excellence (NICE) guideline on early management of low back pain in adults (2009) and expands its remit. It summarises the updated recommendations from NICE for the assessment and management of low back pain and sciatica.<sup>5</sup> For a visual summary, please see infographic. It is intended to overcome patchy commissioning of back pain pathways and pain management programmes<sup>6</sup> and poor implementation due to clinicians' beliefs that previous recommendations were constraining clinical practice.<sup>7</sup>

## Recommendations

NICE recommendations are based on systematic reviews of best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the Guideline Development Group's experience and opinion of what constitutes good practice. Evidence levels for the recommendations are given in italic in square brackets. Here we shall focus on those areas of most relevance to primary and community care.

## Assessment of low back pain and sciatica

Make a positive clinical diagnosis of low back pain and sciatica. Imaging should be done only in specialist care settings and only if the result is likely to change management. Think about the possibility of serious underlying pathology. Consider risk stratification to inform discussion about treatment options.

- Think about alternative diagnoses when examining or reviewing people with low back pain, particularly if they develop new or changed symptoms. Exclude specific causes of low back pain—for example, cancer, infection, trauma, or inflammatory disease such as spondyloarthritis. [*Based*

*on the experience and opinion of the Guideline Development Group (GDG)]*

- Consider using risk stratification (such as the STarT Back risk assessment tool (see box 1)) at first point of contact with a healthcare professional for each new episode of low back pain with or without sciatica, to inform shared decision-making about stratified management. [*Based on low to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG*]
- Based on risk stratification, consider:
  - Simpler and less intensive support for people with low back pain with or without sciatica who are likely to improve quickly and have a good outcome (for example, reassurance, advice to keep active, and guidance on self management).
  - More complex and intensive support for people with low back pain with or without sciatica at higher risk of a poor outcome (for example, exercise programmes with or without manual therapy or using a psychological approach).
 [*Based on the experience and opinion of the GDG*]
- Do not routinely offer imaging in a non-specialist setting for people with low back pain with or without sciatica. [*Based on low to very low quality evidence from randomised controlled trials and cohort studies, and the experience and opinion of the GDG*]
- Explain to people with low back pain with or without sciatica that, if they are being referred for specialist opinion, they may not need imaging. [*Based on low to very low quality evidence from randomised controlled trials and cohort studies, and the experience and opinion of the GDG*]

**What you need to know**

- Consider risk stratification (such as with the STarT Back tool) to target more intensive support at initial presentation for those less likely to recover quickly
- Consider exercises such as stretching, strengthening, aerobic, yoga, or Tai Chi in a group setting for all patients with low back pain and sciatica as the main component of non-invasive treatment. Manual therapy and psychological approaches should be recommended only alongside an exercise programme, while acupuncture or electrotherapies should not be recommended
- Consider a short course of non-steroidal anti-inflammatory drugs (NSAIDs), or a weak opioid where an NSAID is ineffective or poorly tolerated, and do not offer paracetamol alone for low back pain; and consider neuropathic drugs such as gabapentin and epidural steroids for sciatica

**Box 1: STarT Back Screening Tool (created by Keele University)**

For questions 1-8, score 1 for agreement, 0 for disagreement

1. My back pain has spread down my leg(s) at some time in the last 2 weeks
2. I have had pain in the shoulder or neck at some time in the last 2 weeks
3. I have only walked short distances because of my back pain
4. In the last 2 weeks, I have dressed more slowly than usual because of back pain
5. It's not really safe for a person with a condition like mine to be physically active
6. Worrying thoughts have been going through my mind a lot of the time
7. I feel that my back pain is terrible and it's never going to get any better
8. In general I have not enjoyed all the things I used to enjoy
9. Overall, how bothersome has your back pain been in the last 2 weeks?  
Not at all (0), Slightly (0), Moderately (0), Very much (1), Extremely (1)

STarT Back scoring: Low risk = total score 0-3; high risk = score 4-5 of questions 5-9 only; the rest are medium risk.

**Non-invasive treatments for low back pain and sciatica***Physical programmes*

People with a good prognosis can be offered simple and less intensive support, such as advice to keep active and support for self management. Exercise programmes form the basis of the treatments recommended by the GDG because they are effective and can be continued beyond the episode of low back pain to confer longer term benefits, unlike passive treatments such as manual therapy. More intensive treatments could include a cognitive behavioural approach, manual therapy, and educational components alongside exercise.

- Provide people with advice and information, tailored to their needs and capabilities, to help them self manage their low back pain with or without sciatica at all steps of the treatment pathway. Include:
  - Information on the nature of low back pain and sciatica
  - Encouragement to continue with normal activities.

[Based on the experience and opinion of the GDG]
- Consider a group exercise programme (biomechanical, aerobic, mind-body, or a combination of approaches) within the NHS for people with a specific episode or flare-up of low back pain with or without sciatica. Take people's specific needs, preferences, and capabilities into account when choosing the type of exercise. [Based on moderate to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG]
- Consider manual therapy (manipulation, mobilisation, or soft tissue techniques such as massage) or psychological therapies using a cognitive behavioural approach, or both, for managing low back pain with or without sciatica, but only as part of a treatment package including exercise. [Based on high to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG]
- Consider a combined physical and psychological programme incorporating a cognitive behavioural approach

(preferably in a group context that takes into account a person's specific needs and capabilities) for people with persistent low back pain or sciatica:

- When they have substantial psychosocial obstacles to recovery (for example, avoiding normal activities based on inappropriate beliefs about their condition)
  - When previous treatments have not been effective.
- [Based on moderate to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG]

- Do not offer acupuncture for managing low back pain with or without sciatica. [Based on high to very low quality evidence from randomised controlled trials]

*Medication*

Review analgesia, continue only recommended drugs that are helpful and minimise harm (such as gastrointestinal, cardiac, and renal toxicity with non-steroidal anti-inflammatory drugs (NSAIDs), and confusion or dependency with opioids).

- Consider oral NSAIDs for managing low back pain, taking into account potential differences in gastrointestinal, liver, and cardio-renal toxicity and the person's risk factors, including age. [Based on moderate to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG]
- Consider weak opioids (with or without paracetamol) for managing acute low back pain only if an NSAID is contraindicated, not tolerated, or has been ineffective. [Based on the experience and opinion of the GDG]
- Do not offer opioids for managing chronic low back pain. [Based on moderate to very low quality evidence from randomised controlled trials]
- Do not offer paracetamol alone for managing low back pain. [Based on low to very low quality evidence from randomised controlled trials]

## Additional treatments for sciatica

The sciatica pathway presents additional options to the non-invasive treatments above. The timing and sequencing of these options depends on the clinical circumstances.

- Consider:
  - Pharmacological management of sciatica, as summarised in NICE's guideline on neuropathic pain in adults.<sup>8</sup>
  - Epidural injections of local anaesthetic and steroid in people with acute and severe sciatica. [*Based on high to very low quality evidence from randomised controlled trials and the experience and opinion of the GDG*]
  - Spinal decompression for people with sciatica when non-surgical treatment has not improved pain or function and their radiological findings are consistent with sciatic symptoms. [*Based on low to very quality evidence from randomised controlled trials and cohort studies, and the experience and opinion of the GDG*]
- Do not allow a person's body mass index, smoking status, or psychological distress to influence the decision to refer them for a surgical opinion for sciatica. [*Based on low to very low quality evidence from cohort studies and the experience and opinion of the GDG*]

## Additional treatment for low back pain

Radiofrequency denervation is effective for people with severe localised low back pain arising from structures innervated by the medial branch nerves, where other non-surgical treatments have not worked for them.

- Consider referral for assessment for radiofrequency denervation for people with chronic low back pain. [*Based on moderate to very low quality evidence from randomised controlled trials, a cost effectiveness analysis, and the experience and opinion of the GDG*]

## Persistent low back pain

About 20% of people are still symptomatic<sup>2</sup> and 3% remain off work<sup>9</sup> a year after an episode of low back pain. The guideline encourages clinicians to consider the risks and benefits of pursuing investigations and continuing treatments where these are of limited benefit. Instead, patients could return to primary care management, with pain clinic support where needed.

The members of the Guideline Committee were Babak Arvin, Ian Bernstein, Suzanne Blowey, Patrick Hill, Mark Mason, Wendy Menon, Gary MacFarlane, Neil O'Connell, Diana Robinson, Philip Sell, Simon Somerville, Helen Taylor, Steven Vogel, David Walsh, Stephen Ward (chair), and Chris Wells.

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IAB is employed by London North West Healthcare NHS Trust, is a partner at Gordon House Surgery, and is employed by NHS Ealing CCG as clinical commissioning lead for MSk services, London; he received funding, travel, and subsistence allowances for committee work, lecturing, and organising educational workshops from NHS Ealing CCG, the Association for Medical Osteopathy, the Arthritis and Musculoskeletal Alliance, the NHS Alliance, the British Institute of Musculoskeletal Medicine, the British Society for Rheumatology, CloserStill Media Healthcare, Royal College of General Practitioners, Imperial College London, and NICE. QM is employed by the Royal College of Physicians, London. SC is employed by the Royal College of Physicians, London. SW is employed by Brighton and Sussex University Hospitals NHS Trust, Brighton. He was a director of Back@Work until January 2016; a company that provides a community pain management service for the residents of mid-Sussex. He received accommodation, travel, and subsistence allowances for committee work and lecturing from the American Society of Interventional Pain Physicians and NICE. He has lectured or provided expert opinion (non-remunerated) at meetings at the Faculty of Pain Medicine, St Thomas' Hospital, the Congress of the European Pain Federation, and the Spinal Intervention Society.

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### Guidelines into practice

- How has your discussion of treatment options been guided by risk stratification? (QI project)
- What proportion of your patients with low back pain are prescribed paracetamol or co-codamol (exclude those with acute pain prescribed co-codamol because an NSAID is contraindicated, not tolerated, or is ineffective)? (Audit)
- What proportion of your patients who present with low back pain are referred for imaging (exclude those with suspected cancer, infection, trauma, or inflammatory disease such as spondyloarthritis)? (Audit)

### Uncertainties for future research

The Guideline Development Group identified the following areas as needing further research:

- What is the clinical and cost effectiveness of benzodiazepines for the acute management of non-specific low back pain?
- What is the clinical and cost effectiveness of codeine with and without paracetamol for the acute management of non-specific low back pain?
- What is the clinical and cost effectiveness of radiofrequency denervation for chronic non-specific low back pain in the long term?
- What is the clinical and cost effectiveness of image guided, compared with non-image guided, epidural injections for people with acute sciatica?
- What is the role, timing, and cost effectiveness of spinal fusion for non-specific low back pain?

### How patients were involved in the creation of this article

Although patients were not directly involved in the creation of this summary article, committee members involved in developing this guideline included lay members who contributed to the formulation of the recommendations. Patient organisations were among the registered stakeholders who were consulted at both scoping and development stages.

### Further information on the guidance

#### Methods

The guideline was developed following standard NICE guideline methodology.<sup>10</sup> The Guideline Development Group (GDG) comprised of two consultants in pain medicine, an epidemiologist, two general practitioners (one a musculoskeletal physician), a manual therapist, a neurosurgeon, a consultant nurse in chronic pain, a physiotherapist, a clinical psychologist, a rheumatologist, a spinal surgeon, and two patient members. The GDG developed clinical questions, collected and appraised clinical evidence, and evaluated the cost effectiveness of proposed interventions and management strategies through literature review and economic analysis.

Quality ratings of the evidence were based on GRADE methodology.<sup>11</sup> These relate to the quality of the available evidence for assessed outcomes rather than the quality of the clinical study. Where standard methodology could not be applied, a customised quality assessment was undertaken. These were either presented as a narrative summary of the evidence or in customised GRADE tables (for example, for observational studies).

The draft guideline went through a rigorous reviewing process in which stakeholder organisations were invited to comment; the group took all comments into consideration when producing the final version of the guideline. The guideline is available in three formats: a full version,<sup>12</sup> a short version,<sup>5</sup> and information for the public<sup>13</sup> for people who have low back pain and sciatica, their families and carers, and the general public.