NICE National Institute for Health and Care Excellence

NICE guideline

Low back pain and sciatica in over 16s: assessment and management

NICE guideline
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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline replaces CG88.

This guideline is the basis of QS155.

This guideline should be read in conjunction with NG193.

Overview

This guideline covers assessing and managing low back pain and sciatica in people aged 16 and over. It outlines physical, psychological, pharmacological and surgical treatments to help people manage their low back pain and sciatica in their daily life. The guideline aims to improve people's quality of life by promoting the most effective forms of care for low back pain and sciatica.

The recommendations in this guideline were developed before the COVID-19 pandemic.

For advice on neuropathic pain not related to sciatica, see the NICE guideline on neuropathic pain in adults.

Who is it for?

- Healthcare professionals
- Commissioners and providers of healthcare
- People with low back pain or sciatica, and their families and carers

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Assessment of low back pain and sciatica

Alternative diagnoses

1.1.1 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. If serious underlying pathology is suspected, refer to relevant NICE guidelines on:

- metastatic spinal cord compression in adults
- spinal injury
- spondyloarthritis in over 16s
- suspected cancer. **[2016]**

Risk assessment and risk stratification tools

1.1.2 Consider using risk stratification (for example, the STarT Back risk assessment tool) 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. **[2016]**

1.1.3 Based on risk stratification, consider:

- simpler and less intensive support for people with low back pain with or without sciatica 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). **[2016]**

Imaging

1.1.4 Do not routinely offer imaging in a non-specialist setting for people with low back pain with or without sciatica. **[2016]**

1.1.5 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. **[2016]**

1.1.6 Consider imaging in specialist settings of care (for example, a musculoskeletal interface clinic or hospital) for people with low back pain with or without sciatica only if the result is likely to change management. **[2016]**

1.2 Non-invasive treatments for low back pain and sciatica

Non-pharmacological interventions

Self-management

1.2.1 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. **[2016]**

Exercise

1.2.2 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. **[2016]**

Orthotics

1.2.3 Do not offer belts or corsets for managing low back pain with or without sciatica. **[2016]**

1.2.4 Do not offer foot orthotics for managing low back pain with or without sciatica. **[2016]**

1.2.5 Do not offer rocker sole shoes for managing low back pain with or without sciatica. **[2016]**

Manual therapies

1.2.6 Do not offer traction for managing low back pain with or without sciatica. **[2016]**

1.2.7 Consider manual therapy (spinal manipulation, mobilisation or soft tissue techniques such as massage) for managing low back pain with or without sciatica, but only as part of a treatment package including exercise, with or without psychological therapy. **[2016]**

Acupuncture

1.2.8 Do not offer acupuncture for managing low back pain with or without sciatica. **[2016]**

Electrotherapies

1.2.9 Do not offer ultrasound for managing low back pain with or without sciatica. **[2016]**

1.2.10 Do not offer percutaneous electrical nerve simulation (PENS) for managing low back pain with or without sciatica. **[2016]**

1.2.11 Do not offer transcutaneous electrical nerve simulation (TENS) for managing low back pain with or without sciatica. **[2016]**

1.2.12 Do not offer interferential therapy for managing low back pain with or without sciatica. **[2016]**

Psychological therapy

1.2.13 Consider psychological therapies using a cognitive behavioural approach for managing low back pain with or without sciatica but only as part of a treatment package including exercise, with or without manual therapy (spinal manipulation, mobilisation or soft tissue techniques such as massage). **[2016]**

Combined physical and psychological programmes

1.2.14 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 significant psychosocial obstacles to recovery (for example, avoiding normal activities based on inappropriate beliefs about their condition) **or**
- when previous treatments have not been effective. **[2016]**

Return-to-work programmes

1.2.15 Promote and facilitate return to work or normal activities of daily living for people with low back pain with or without sciatica. **[2016]**

Pharmacological management of sciatica

1.2.16 Do not offer gabapentinoids, other antiepileptics, oral corticosteroids or benzodiazepines for managing sciatica as there is no overall evidence of benefit and there is evidence of harm. **[2020]**

1.2.17 Do not offer opioids for managing chronic sciatica. **[2020]**

1.2.18 If a person is already taking opioids, gabapentinoids or benzodiazepines for sciatica, explain the risks of continuing these medicines. See also the section on reviewing medicines in NICE's guideline on medicines associated with dependence or withdrawal symptoms. **[2020]**

1.2.19 As part of shared decision making about whether to stop opioids, gabapentinoids or benzodiazepines for sciatica, discuss the problems associated with withdrawal with the person.

To support discussions with patients about the benefits and harms of these

treatment, and safe withdrawal management, see:

- NICE's guideline on medicines associated with dependence or withdrawal symptoms
- NICE's guideline on shared decision making
- the section on medication review in NICE's guideline on medicines optimisation. **[2020]**.

1.2.20 Be aware of the risk of harms and limited evidence of benefit from the use of non-steroidal anti-inflammatory drugs (NSAIDs) in sciatica. **[2020]**

1.2.21 If prescribing NSAIDs for sciatica:

- take into account potential differences in gastrointestinal, liver and cardio-renal toxicity, and the person's risk factors, including age
- think about appropriate clinical assessment, ongoing monitoring of risk factors, and the use of gastroprotective treatment
- use the lowest effective dose for the shortest possible period of time. **[2020]**

For a short explanation of why the committee made the 2020 recommendations and how they might affect practice, see the rationale and impact section on pharmacological management of sciatica.

The committee have also made recommendations for research on opioids for the management of acute sciatica, and antidepressants for the management of sciatica.

Full details of the evidence and the committee's discussion are in evidence review A: pharmacological management of sciatica.

Pharmacological management of low back pain

1.2.22 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. **[2016]**

1.2.23 When prescribing oral NSAIDs for low back pain, think about appropriate clinical assessment, ongoing monitoring of risk factors, and the use of gastroprotective treatment. **[2016]**

1.2.24 Prescribe oral NSAIDs for low back pain at the lowest effective dose for the shortest possible period of time. **[2016]**

1.2.25 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. For guidance on safe prescribing of opioids and managing withdrawal, see NICE's guideline on medicines associated with dependence or withdrawal symptoms. **[2016]**

1.2.26 Do not offer paracetamol alone for managing low back pain. **[2016]**

1.2.27 Do not routinely offer opioids for managing acute low back pain (see recommendation 1.2.25). **[2016]**

1.2.28 Do not offer opioids for managing chronic low back pain. **[2016]**

1.2.29 Do not offer selective serotonin reuptake inhibitors, serotonin–norepinephrine reuptake inhibitors or tricyclic antidepressants for managing low back pain. **[2016]**

1.2.30 Do not offer gabapentinoids or antiepileptics for managing low back pain. **[2016, amended 2020]**

1.3 Invasive treatments for low back pain and sciatica

Non-surgical interventions

Spinal injections

1.3.1 Do not offer spinal injections for managing low back pain. **[2016]**

Radiofrequency denervation

1.3.2 Consider referral for assessment for radiofrequency denervation for people with chronic low back pain when:

- non-surgical treatment has not worked for them **and**
- the main source of pain is thought to come from structures supplied by the medial branch nerve **and**
- they have moderate or severe levels of localised back pain (rated as 5 or more on a visual analogue scale, or equivalent) at the time of referral. **[2016]**

1.3.3 Only perform radiofrequency denervation in people with chronic low back pain after a positive response to a diagnostic medial branch block. **[2016]**

1.3.4 Do not offer imaging for people with low back pain with specific facet join pain as a prerequisite for radiofrequency denervation. **[2016]**

Epidurals

1.3.5 Consider epidural injections of local anaesthetic and steroid in people with acute and severe sciatica. **[2016]**

1.3.6 Do not use epidural injections for neurogenic claudication in people who have central spinal canal stenosis. **[2016]**

Surgical interventions

Surgery and prognostic factors

1.3.7 Do not allow a person's BMI, smoking status or psychological distress to influence the decision to refer them for a surgical opinion for sciatica. **[2016]**

Spinal decompression

1.3.8 Consider 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. **[2016]**

Spinal fusion

1.3.9 Do not offer spinal fusion for people with low back pain unless as part of a randomised controlled trial. **[2016]**

Disc replacement

1.3.10 Do not offer disc replacement in people with low back pain. **[2016]**

Terms used in this guideline

This section defines terms that have been used in a particular way for this guideline. For other definitions see the NICE glossary and the Think Local, Act Personal Care and Support Jargon Buster.

Acute

Less than 3 months duration.

Chronic

A 3-month duration or longer. The intensity of pain may fluctuate over time.

Weak opioids

See the information on weak opioids in the analgesics section of the BNF.

Recommendations for research

The guideline committee has made the following recommendations for research.

Key recommendations for research

1 Pharmacological therapies

What is the clinical and cost effectiveness of opioids for the management of acute sciatica? **[2020]**

2 Pharmacological therapies

What is the clinical and cost effectiveness of antidepressants for the management of sciatica? **[2020]**

For a short explanation of why the committee made the 2020 recommendations for research, see the rationale section on pharmacological management of sciatica.

Full details of the evidence and the committee's discussion are in evidence review A: pharmacological management of sciatica.

3 Pharmacological therapies

What is the clinical and cost effectiveness of benzodiazepines for the management of acute low back pain? **[2016]**

4 Pharmacological therapies

What is the clinical and cost effectiveness of codeine with and without paracetamol for the management of acute low back pain? **[2016]**

5 Radiofrequency denervation

What is the clinical and cost effectiveness of radiofrequency denervation for chronic low back pain in the long term? **[2016]**

Other recommendations for research

6 Epidurals

What is the clinical and cost effectiveness of image-guided compared with non-image-guided epidural injections for people with acute sciatica? **[2016]**

7 Spinal fusion

Should people with low back pain be offered spinal fusion as a surgical option? **[2016]**

Full details of the 2016 recommendations for research are in the full guideline.

Rationale and impact

This section briefly explains why the committee made the recommendations and how they might affect practice. They link to details of the evidence and a full description of the committee's discussion.

Pharmacological management of sciatica

Recommendations 1.2.16 to 1.2.21

Why the committee made the recommendations

The evidence showed that gabapentinoids did not improve sciatica symptoms, and oral corticosteroids did not improve pain or function, but may have an impact on quality of life. Both increased the risk of adverse events in the long-term. While there was no evidence of increased risk of adverse events associated with benzodiazepines, there was evidence of poorer response than placebo in terms of pain reduction. The committee considered:

- the evidence reviewed,
- knowledge of the potential longer-term harms, and
- the reclassification of gabapentin and pregabalin as Schedule 3 controlled drugs (April 2019 UK Government drug safety update) because of the evidence for risk of abuse and dependence of these drugs.

The committee agreed that although the evidence about lack of effectiveness was limited, the harms would outweigh the benefits for most people with sciatica and therefore agreed to recommend against the use of gabapentinoids, oral corticosteroids and benzodiazepines for sciatica.

There was no evidence on the use of antiepileptics (other than gabapentinoids) for sciatica. Given the lack of evidence, and the committee's knowledge of potential harms, they agreed to recommend that antiepileptics (including gabapentinoids) should not be used for sciatica.

There was no evidence on the use of opioids for sciatica. Given the lack of evidence and

the committee's knowledge of potential harms when used long term, the committee agreed to recommend against the use of opioids for chronic sciatica. However, the committee discussed whether opioids might be effective when used short term for acute sciatica, so made a research recommendation on this topic.

There was no evidence on the use of antidepressants for sciatica. The committee agreed that antidepressants were commonly prescribed for sciatica, and clinical experience suggests they may be of benefit in some people. The committee considered the potential for harm to be less than the harms of prolonged use of opioids. On this basis, the committee made a research recommendation to determine if there was any clinical benefit for their use to treat sciatica.

Limited evidence showed no benefit from NSAIDs for sciatica. The committee discussed that there were also known risks of harms from NSAIDs that most clinicians were aware of so they were unlikely to be continued if they were not helpful. They agreed there was not sufficient evidence to make a recommendation for or against the use of NSAIDs for sciatica, but agreed to include a recommendation highlighting the risk of harms and lack of evidence of benefit as well as a research recommendation on this topic.

The committee were aware that some people may already be using opioids, antiepileptics (including gabapentinoids) and benzodiazepines for long periods for sciatica. Given the potential harms from sudden withdrawal of these medicines, based on consensus, they recommended discussing with the person the potential harms of long-term use and the need to withdraw safely if they chose to do so.

No evidence was identified for paracetamol, nefopam or muscle relaxants other than benzodiazepines for the management of sciatica. The committee agreed that none of these are widely prescribed for sciatica. They noted that advice is already included in this guideline for the use of paracetamol for people with low back pain. Therefore no further recommendations were made regarding management of sciatica alone, and these medicines do not warrant further research.

How the recommendations might affect practice

These recommendations are expected to reduce the use of gabapentinoids and other antiepileptics, corticosteroids, benzodiazepines and long-term opioid analgesics for sciatica. This will reduce the chance of adverse events and dependence on medicines that are unlikely to provide clinical benefit. It might lead to an increased use of other

recommended treatments.

Return to recommendations

Context

Low back pain that is not associated with serious or potentially serious causes has been described in the literature as 'non-specific', 'mechanical', 'musculoskeletal' or 'simple' low back pain. For consistency, we have used the term 'low back pain' throughout this guideline. However, 'non-specific low back pain' was used when creating the review questions. Worldwide, low back pain causes more disability than any other condition. Episodes of back pain usually do not last long, with rapid improvements in pain and disability seen within a few weeks to a few months. Although most back pain episodes get better with initial primary care management, without the need for investigations or referral to specialist services, up to one-third of people say they have persistent back pain of at least moderate intensity a year after an acute episode needing care, and episodes of back pain often recur.

One of the greatest challenges with low back pain is identifying risk factors that may predict when a single back pain episode will become a long-term, persistent pain condition. When this happens, quality of life is often very low and healthcare resource use high.

This guideline gives guidance on the assessment and management of both low back pain and sciatica from first presentation onwards in people aged 16 years and over.

We use 'sciatica' to describe leg pain secondary to lumbosacral nerve root pathology rather than the terms 'radicular pain' or 'radiculopathy', although they are more accurate. This is because 'sciatica' is a term that patients and clinicians understand, and it is widely used in the literature to describe neuropathic leg pain secondary to compressive spinal pathology.

This guideline does not cover the evaluation or care of people with sciatica with progressive neurological deficit or cauda equina syndrome. All clinicians involved in the management of sciatica should be aware of these potential neurological emergencies and know when to refer to an appropriate specialist.

A review of the NICE guideline on neuropathic pain in adults, triggered by an MHRA safety update of the reclassification of gabapentin and pregabalin as controlled drugs, highlighted the need for reconsideration of these as suitable treatments for sciatica. It was decided that update should sit within the guideline for low back pain and sciatica,

alongside other treatment recommendations for sciatica.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on low back pain.

For full details of the evidence and the guideline committee's discussions, see the evidence review and full guideline. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

December 2020: We reviewed our guidance on opioids for non-cancer pain in response to a Public Health England evidence review on dependence on, and withdrawal from, prescribed medicines. We added links in recommendation 1.2.19 to other NICE guidelines that support discussion with patients about opioid prescribing, and safe withdrawal management.

September 2020: We have reviewed the evidence and made new recommendations on pharmacological management for people with sciatica. These recommendations are marked **[2020]**.

We have also updated a recommendation to bring it in line with current terminology. This recommendation is marked **[2016, amended 2020]**.

Recommendations marked **[2016]** last had an evidence review in 2016. In some cases minor changes have been made to the wording to bring the language and style up to date, without changing the meaning.

Minor changes since publication

April 2022: We added a link to NICE's guideline on medicines associated with dependence or withdrawal symptoms in the sections on pharmacological management of sciatica and low back pain.

October 2021: We added a link to NICE's guideline on shared decision making in recommendation 1.2.19.

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