

Management of acute low back pain

This bulletin discusses the appropriate management of acute, uncomplicated or **non-specific** low back pain in the primary care setting. It focuses on overall management strategies, including appropriate first-line medicines.

Background

Non-specific low back pain is pain, muscle tension, or stiffness localised below the costal margin and above the inferior gluteal folds, possibly with radiation to the buttocks or thighs. This is distinct from, but can be associated with, true radicular or nerve root pain that extends below a knee, e.g. sciatica. Low back pain is not a homogenous condition. People present with low back pain of differing levels of severity and associated disability (some people continue to work and lead active lives, whereas others are severely incapacitated).

Low back pain is very common in working adults, particularly those aged between 40 and 60 years.¹ The lifetime prevalence of back pain is up to 80%, with up to half the adult population reporting low back pain in any given year.^{1,2}

Economic impact

Appropriate early management of low back pain in the community is important to help reduce personal suffering and the adverse social and economic impact that persisting pain and recurrence can have. The costs of low back pain cannot be overestimated. In addition to the direct costs – treatments and incapacity benefit payments – there are indirect costs, such as those incurred by businesses due to the loss of human resources.³ It generally costs more to recruit and train someone to do a job than it does to rehabilitate an employee with back problems.⁴ Some estimates put the cost of low back pain to the UK at more than £17 billion a year.⁴

In 2004/5, 4.5 million working days were lost through back pain in the UK. On average, each sufferer took an estimated 17.4 days off work.⁵

A 2005 report for Wales stated that approximately 28,000 people were claiming incapacity benefits at a cost of £90 million, and the cost to employers of sickness absence was £250 million.⁶ Healthcare costs were estimated at £150 million.⁶ During 2005/6, 12% of adults in Wales were reportedly being treated for low back pain.⁷

Clinical overview

Frustratingly, low back pain frequently starts for no apparent reason or after ordinary activity, and recovery is unpredictable. Most cases are minor and self-limiting with approximately 90% of people recovering within six weeks.⁸ In clinical practice, non-specific low back pain present for less than six weeks is usually classified as "acute". It is described as "sub-acute" when pain persists between six weeks and three months, and "chronic" for longer than three months.^{2,9} Acute back pain can recur after symptom-free periods.

Only a small number (fewer than 5%) of people with back pain have a diagnosable condition, and serious causes are rare:¹⁰

- ♦ fewer than 1% are diagnosed with disease such as a spinal tumour or infection.
- ♦ fewer than 1% have inflammatory disease such as ankylosing spondylitis.
- ♦ fewer than 5% have true nerve root pain, and only a small proportion of these people will need an operation.

Providing the history and clinical examination exclude "red flag" signs (see Box 1), primary care clinicians are well placed to manage the vast majority of low back pain presentations.

This bulletin has been developed in collaboration with the Welsh Backs campaign

Clinical assessment

A thorough history is an essential component of the assessment of low back pain in primary care. The extent of the clinical examination will be guided by the history but should identify any relevant abnormal neurological signs and assess the degree of functional limitation caused by the pain. This assessment should enable any “red flags” to be excluded (see Box 1) and a diagnosis of non-specific or mechanical low back pain to be made.⁹

In an individual with low back pain, it is seldom possible or useful to identify the precise source/s of pain (e.g. muscle, fascia, ligament, bone, joint, or disc).¹¹ No form of imaging is recommended in acute non-specific low back pain.^{9,11}

Occupational issues need to be included in any assessment (see page 3). For persisting pain, risk factors for chronic disability should also be considered (see Box 2 for “yellow flags”).¹¹

Box 1 Red flag signs

Red flag signs that may be suggestive of spinal tumours, infection, cauda equina compression, or spinal fractures include:

- ◆ major trauma or minor trauma with osteoporosis.
- Consider plain x-ray of lumbar spine.*
- ◆ age <20 years, or new back pain age >55 years
 - ◆ history of cancer
 - ◆ constitutional symptoms, fever, weight loss
 - ◆ IV drug abuse
 - ◆ immunosuppression
 - ◆ severe night pain, pain worse when supine

Consider FBC, ESR, CRP, bone profile, PSA, bone scan, referral.

- ◆ saddle anaesthesia, recent bladder dysfunction (retention, overflow incontinence)
- ◆ severe and/or progressive neurological deficit in lower extremities
- ◆ major motor weakness

Refer immediately for emergency assessment.

Management

Successful management of uncomplicated low back pain hinges on providing appropriate educational advice. Simple, short-term pain relief can be used where necessary, and physical activity should be encouraged. People suffering with low back pain usually want accurate information about their problem and providing this often aids recovery.¹²

Educational advice*

- ◆ Back pain is a physical, not psychological problem.
- ◆ Back pain is a mechanical problem, but it arises from a disturbance of function rather than structural damage.
- ◆ Back pain is an everyday bodily symptom; it is not a disease, nor a sign of serious disease (red flag signs excluded).
- ◆ The outlook is good. Most people with acute low back pain are functioning normally within a few days and are pain-free (or nearly pain-free) within three weeks.
- ◆ Medication to control pain may be provided but this is to help relieve symptoms – it will not provide a cure.
- ◆ Recovery depends on getting moving again, restoring normal function and fitness and, where applicable, getting back to work as soon as possible.
- ◆ Positive attitudes are important. ‘Copers’ suffer less, get better quicker, and have less trouble in the long term.

*Taken from The Back Book¹³ available to order at: <http://www2.nphs.wales.nhs.uk:8080/BackBookRequests.nsf/MainForm>

Appropriately managing acute low back pain can reduce the risk of recurrence, and the development of chronic pain and disability with the associated psychological and social problems. “Yellow flags” (see Box 2) are risk factors associated with poor recovery;^{2,9} their presence should alert the clinician to a potential for long-term problems.

There is a need for validated instruments to assess these risk factors and identify people at high risk of chronic problems. Currently, the New Zealand screening questionnaire for psycho-social barriers to recovery is one formal tool commonly used for assessing “yellow flags”.¹⁴

Box 2 Yellow flags

- ◆ Belief that pain and activity are harmful.
- ◆ Sickness behaviour, such as extended rest.
- ◆ Social withdrawal.
- ◆ Emotional problems, such as stress, low or negative mood, depression, or anxiety.
- ◆ Problems and/or dissatisfaction at work.
- ◆ Problems with claims, compensation, or time off work.
- ◆ Overprotective family.
- ◆ Lack of support.
- ◆ Inappropriate expectations of treatment, such as expecting little active participation in treatment.

Medication

Medication is used to alleviate acute low back pain, not cure the problem. Simple analgesia is preferred as first-line treatment. Paracetamol is the agent of choice because the risk of adverse effects associated with its use is low.¹¹ Nonsteroidal anti-inflammatory drugs (NSAIDs) may also be used for short-term management where indicated, but potential benefit in any individual should be weighed against the higher risk of adverse events. If these alone are ineffective, a combination or the addition of codeine may be considered. If a short course of a muscle relaxant is considered, diazepam is preferred. Warnings relating to the use of benzodiazepines should be heeded.

For further information, an interactive Desk Aid with downloadable resources and patient leaflets will be available at: www.healthyworkingwales.com

References

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Occupational health

As discussed earlier, the social and economic impact of low back pain can be considerable. While back pain is common in adults of working age, and although it can be precipitated by factors at work, only a small proportion of cases are actually caused by work.¹⁰ Most people with back pain continue to work most of the time. Assuming that a person's job is not a barrier to staying active, remaining at work or returning to work early leads to faster recovery and fewer long-term problems.¹⁰

Clinicians in primary care are well placed to provide appropriate advice to ensure continued working or a minimal absence from work. Key steps to take include:

- ◆ Routinely ask people about their job and any related difficulties.
- ◆ Consider the yellow flag risks for chronic problems.
- ◆ Avoid diagnostic labels, especially those that link symptoms to work.
- ◆ Explain that continuing to work, where appropriate (e.g. provided it does not require extended periods of immobility), will speed recovery and reduce recurrences.
- ◆ Do not suggest sick leave (except in the rare instances where there is a strong clinical reason).
- ◆ If sick leave is unavoidable, make it short-term and review progress regularly; advise the employer of the benefits of regular positive and sympathetic contact during sick leave.⁴

Management of acute mechanical low back pain

Introduction

Acute low back pain is common but rarely due to serious pathology.

This desk aid summarises current guidance on the management of acute mechanical low back pain – i.e. within six weeks of onset.

Clinical features

Back pain presenting in patients aged 20 to 55 years which is:

- Located in the lumbosacral area, buttocks and thighs
- Worse in the back than in the legs
- Of less than six weeks duration
- Exacerbated and/or relieved by mechanical factors
- Not associated with systemic upset.

Principles of effective healthcare

Having excluded serious pathology, manage patients by giving:

- **Reassurance** (to reduce anxiety)
 - No sign of serious disease
 - Good natural history of recovery
- **Advice**
 - Maintain normal daily activity including work if possible
 - Avoid bed rest, if possible, as this actually delays recovery
- **Analgesia** – preferably to be taken at regular intervals. Options include:
 - Paracetamol (first choice); NSAIDs (if no contra-indications); combination of two analgesics

Consider a short course of muscle relaxants and/or manipulation for the small proportion of patients whose pain does not settle with advice and analgesia.

Managing occupational issues

- Encourage patients to stay in work if possible
- Consider suggesting work adjustments rather than signing the patient off work
- Consider issuing a Med 3 as 'You need **not** refrain from work' with specific advice to the employer written in the 'remarks' section
- Advise patients initially unfit for work to go back as soon as possible – **they do not need to wait until they are pain free.**



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Addressing beliefs/behaviours that may delay recovery

Patients who fail to resume normal activity may have certain beliefs and behaviours that are delaying recovery. These include:

- A belief that back pain is harmful or potentially seriously disabling
- A reluctance to remain active for fear of pain
- An expectation of 'treatment' rather than engaging in self-help

Tackling these involves:

- Recognition of these beliefs/behaviours
- Reinforcing positive messages (consider the use of appropriate written material)
- Referral if the patient remains unable to manage their pain.

Referral options for patients who do not resume normal activity within six weeks

Guidance recommends that, where possible, referral should be to a multi-disciplinary back pain team. However, local back pain services will vary. These may be physiotherapy or physician led.

Referral for diagnostic imaging or orthopedic surgery is not indicated for mechanical low back pain.

Useful resources/links

Welsh Backs – www.welshbacks.com

Patient information:

- A public information leaflet can be ordered via the website - www.welshbacks.com or by phoning 0845 609 6006
- The Back Book – available from The Stationery Office (www.tso.co.uk/bookshop)

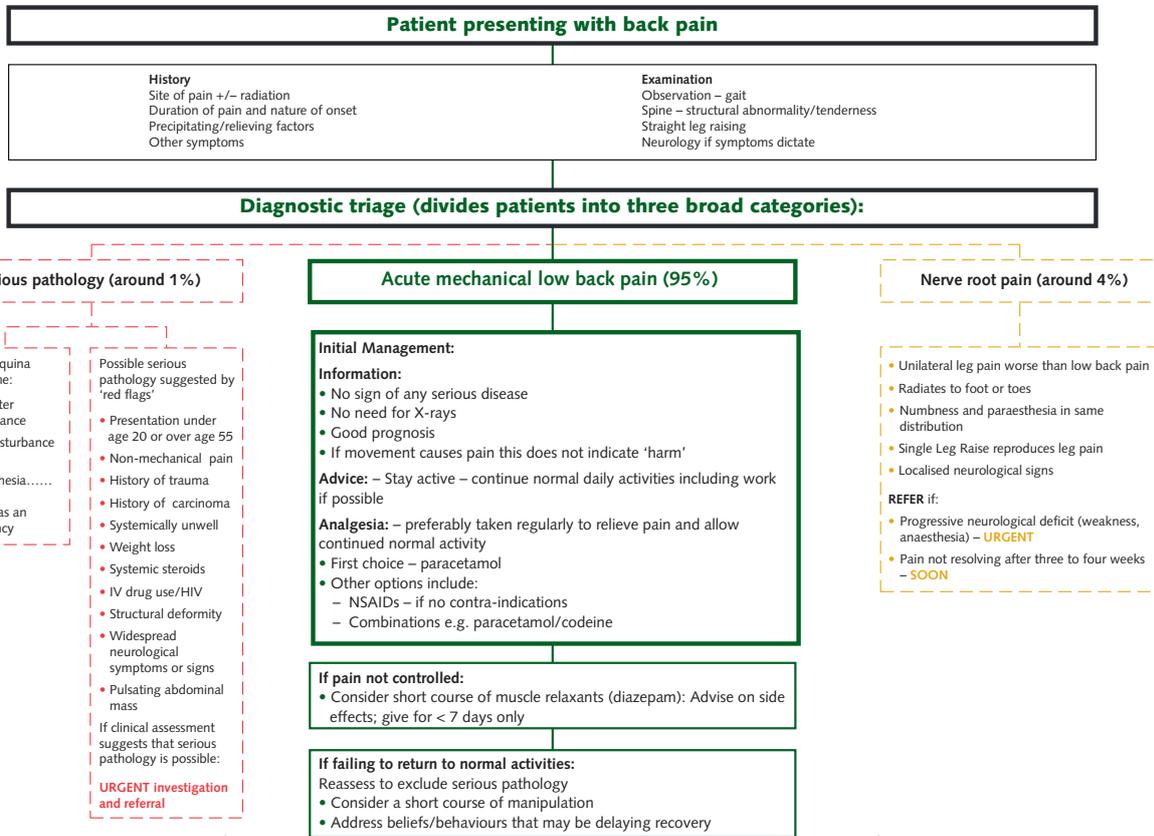
Advice about occupational health issues:

- Referral to a Jobcentre Plus Personal Advisor – www.jobcentreplus.gov.uk
- Referral to a Disability Employment Advisor – www.dwp.gov.uk/medical

References:

- The Occupational Health Guidelines for the Management of Low Back Pain at Work, Faculty of Occupational Medicine, 2000. www.facocmed.ac.uk
- European Guidelines/COST B13 http://www.backpainurope.org/web/files/WG1_Guidelines.pdf
- Referral Guidance: a guide to appropriate referral from general to specialist services, National Institute for Clinical Excellence, 2001. www.nice.org.uk

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This GP Desk Aid is available at the Welsh Backs website: www.welshbacks.com