



*National Institute for
Health and Clinical Excellence*

Quick reference guide

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Hip fracture

The management of hip fracture in adults

About this booklet

This is a quick reference guide that summarises the recommendations NICE has made to the NHS in 'Hip fracture: the management of hip fracture in adults' (NICE clinical guideline 124).

Who should read this booklet?

This quick reference guide is for healthcare professionals and other staff who care for people with hip fracture.

Who wrote the guideline?

The guideline was developed by the National Clinical Guideline Centre, which is based at the Royal College of Physicians. The Guideline Centre worked with a group of healthcare professionals, patients and carers, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

For more information on how NICE clinical guidelines are developed, go to www.nice.org.uk

Where can I get more information about the guideline?

The NICE website has the recommendations in full, reviews of the evidence they are based on, a summary of the guideline for patients and carers, and tools to support implementation (see inside back cover for more details).

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NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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Patient-centred care

Treatment and care should take into account patients' individual needs and preferences. Good communication is essential, supported by evidence-based information, to allow patients to reach informed decisions about their care. Follow advice on seeking consent from the Department of Health or Welsh Assembly Government if needed. If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Introduction

- Hip fracture is a major public health issue due to an ever increasing ageing population. About 70,000 to 75,000 hip fractures occur each year and the annual cost (including medical and social care) for all UK hip fracture cases is about £2 billion.
- About 10% of people with a hip fracture die within 1 month and about one-third within 12 months. Most of the deaths are due to associated conditions and not to the fracture itself, reflecting the high prevalence of comorbidity.
- Because the occurrence of fall and fracture often signals underlying ill health, a comprehensive multidisciplinary approach is required from presentation to subsequent follow-up, including the transition from hospital to community.

This guideline covers the management of hip fracture from admission to secondary care through to final return to the community and discharge from specific follow-up.

Some aspects of hip fracture management are already covered by NICE guidance and are therefore outside the scope of the guideline. In order to ensure comprehensive management and continuity, the following NICE guidance should be referred to when developing a complete programme of care for each patient: osteoporotic fragility fracture prevention (NICE technology appraisals guidance 204, 161 and 160), falls (NICE clinical guideline 21), pressure ulcers (NICE clinical guideline 29), nutrition support (NICE clinical guideline 32), dementia (NICE clinical guideline 42), surgical site infection (NICE clinical guideline 74), venous thromboembolism (NICE clinical guideline 92) and delirium (NICE clinical guideline 103).

Key to terms

Hip fractures (or proximal femoral fractures)

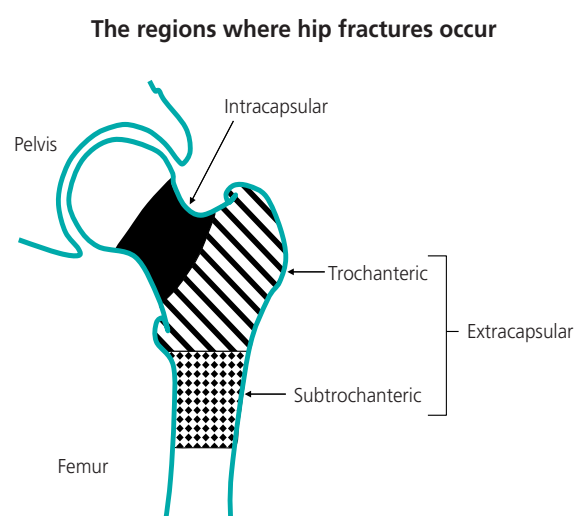
Fractures occurring between the edge of the femoral head and 5 cm below the lesser trochanter.

Intracapsular fractures Fractures between the edge of the femoral head and insertion of the capsule of the hip joint. Also known as femoral neck fractures.

Extracapsular fractures Fractures between the insertion of the capsule of the hip joint and a line 5 cm below the lesser trochanter.

Trochanteric fractures A subgroup of the extracapsular group that includes inter- or pertrochanteric and reverse oblique fractures.

Subtrochanteric fractures A subgroup of the extracapsular group where the fracture occurs below the lesser trochanter.



Key priorities for implementation

Timing of surgery

- Perform surgery on the day of, or the day after, admission.
- Identify and treat correctable comorbidities immediately so that surgery is not delayed by:
 - anaemia
 - anticoagulation
 - volume depletion
 - electrolyte imbalance
 - uncontrolled diabetes
 - uncontrolled heart failure
 - correctable cardiac arrhythmia or ischaemia
 - acute chest infection
 - exacerbation of chronic chest conditions.

Planning the theatre team

- Schedule hip fracture surgery on a planned trauma list.

Surgical procedures

- Perform replacement arthroplasty (hemiarthroplasty or total hip replacement) in patients with a displaced intracapsular fracture.
- Offer total hip replacements to patients with a displaced intracapsular fracture who:
 - were able to walk independently out of doors with no more than the use of a stick **and**
 - are not cognitively impaired **and**
 - are medically fit for anaesthesia and the operation.
- Use extramedullary implants such as a sliding hip screw in preference to an intramedullary nail in patients with trochanteric fractures above and including the lesser trochanter (AO classification types A1 and A2).

Mobilisation strategies

- Offer patients a physiotherapy assessment and, unless medically or surgically contraindicated, mobilisation on the day after surgery.
- Offer patients mobilisation at least once a day and ensure regular physiotherapy review.

continued

Key priorities for implementation *continued*

Multidisciplinary management

- From admission, offer patients a formal, acute orthogeriatric or orthopaedic ward-based Hip Fracture Programme that includes all of the following:
 - orthogeriatric assessment
 - rapid optimisation of fitness for surgery
 - early identification of individual goals for multidisciplinary rehabilitation to recover mobility and independence, and to facilitate return to pre-fracture residence and long-term wellbeing
 - continued, coordinated, orthogeriatric and multidisciplinary review
 - liaison or integration with related services, particularly mental health, falls prevention, bone health, primary care and social services
 - clinical and service governance responsibility for all stages of the pathway of care and rehabilitation, including those delivered in the community.
- Consider early supported discharge as part of the Hip Fracture Programme, provided the Hip Fracture Programme multidisciplinary team remains involved and the patient:
 - is medically stable **and**
 - has the mental ability to participate in continued rehabilitation **and**
 - is able to transfer and mobilise short distances **and**
 - has not yet achieved their full rehabilitation potential, as discussed with the patient, carer and family.

When the patient presents at hospital

- Assess the patient's pain.
- Offer immediate analgesia to patients with suspected hip fracture, including people with cognitive impairment (see page 8).
- Offer magnetic resonance imaging (MRI) if hip fracture is suspected despite negative anteroposterior pelvis and lateral hip X-rays. If MRI is not available within 24 hours or is contraindicated, consider computed tomography (CT).
- Offer all patients a formal, acute, orthogeriatric or orthopaedic ward-based Hip Fracture Programme.

Hip Fracture Programme

This includes all of the following:

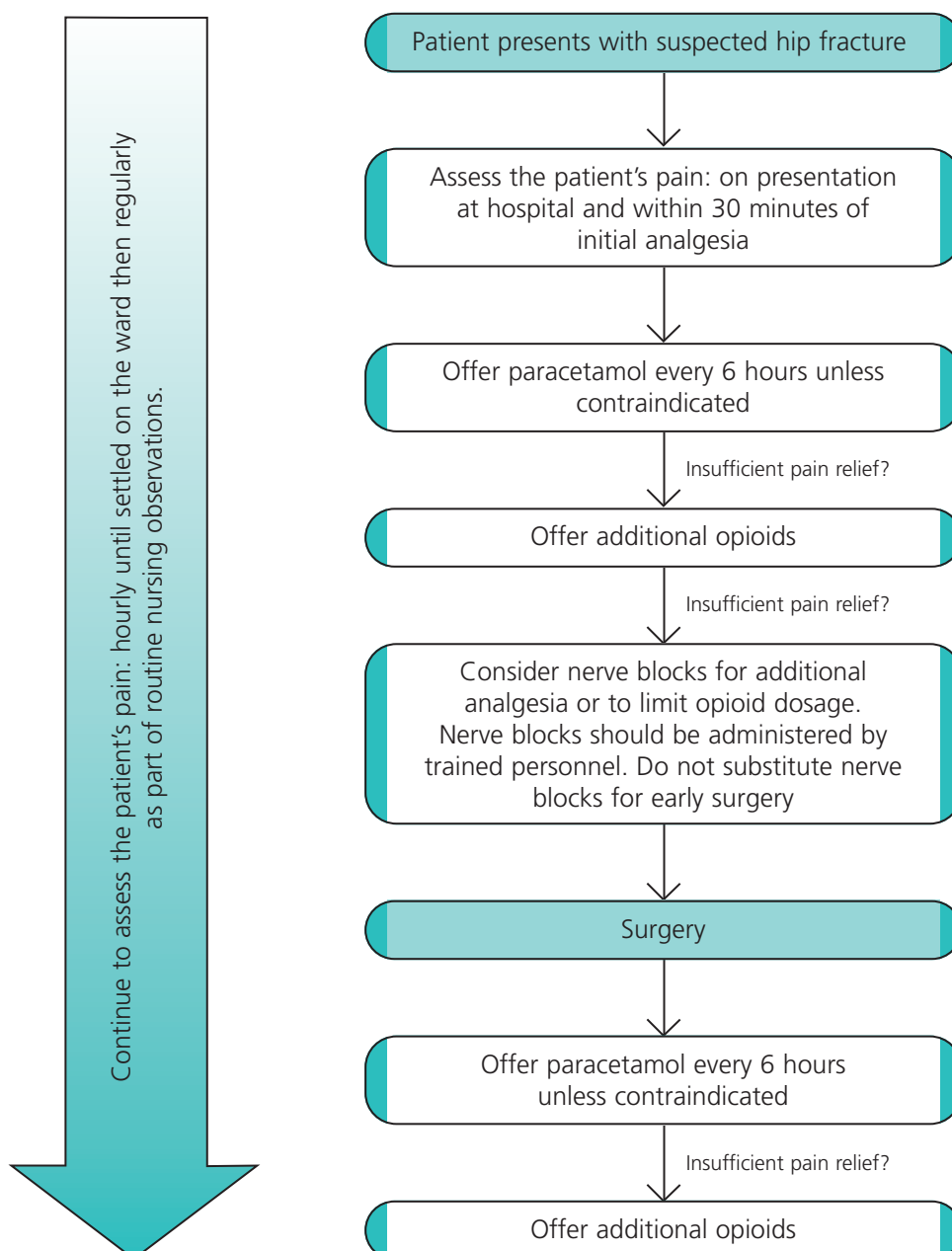
- orthogeriatric assessment
 - rapid optimisation of fitness for surgery
 - early identification of individual goals for multidisciplinary rehabilitation to recover mobility and independence, and to facilitate return to pre-fracture residence and long-term wellbeing
 - continued, coordinated, orthogeriatric and multidisciplinary review
 - liaison or integration with related services
 - clinical and service governance responsibility for all stages of the pathway of care and rehabilitation.
- Actively look for cognitive impairment and keep reassessing patients to identify delirium. Offer individualised care in line with 'Delirium' (NICE clinical guideline 103).
 - If a hip fracture complicates or precipitates a terminal illness, consider the role of surgery as part of a palliative care approach that:
 - minimises pain and other symptoms **and**
 - establishes patients' own priorities for rehabilitation **and**
 - considers patients' wishes about their end-of-life care.

Patient support and information

- Offer patients (or, as appropriate, their carer and/or family) verbal and printed information about treatment and care including:
 - diagnosis
 - choice of anaesthesia
 - choice of analgesia and other medications
 - surgical procedures
 - possible complications
 - postoperative care
 - rehabilitation programme
 - long-term outcomes
 - healthcare professionals involved.

Analgesia

- Assess the patient's pain:
 - immediately upon presentation at hospital **and**
 - within 30 minutes of administering initial analgesia **and**
 - hourly until settled on the ward **and**
 - regularly as part of routine nursing observations throughout admission.
- Ensure analgesia is sufficient to allow movements necessary for investigations and for nursing care and rehabilitation.
- Non-steroidal anti-inflammatory drugs (NSAIDs) are not recommended.



Surgery

Timing of surgery

- Perform surgery on the day of, or the day after, admission
- Identify and treat correctable comorbidities immediately to avoid delaying surgery

Planning surgery

- Schedule surgery on a planned trauma list
- Consultants or senior staff should supervise trainee and junior staff during hip fracture surgery

Anaesthesia

- Offer patients a choice of spinal or general anaesthesia after discussing the risks and benefits
- Consider intraoperative nerve blocks

Surgical procedures

- Operate on patients with the aim to allow them to fully weight bear (without restriction) in the immediate postoperative period
- Perform replacement arthroplasty in patients with a displaced intracapsular fracture
- Offer total hip replacements to patients with a displaced intracapsular fracture who:
 - were able to walk independently **and**
 - are not cognitively impaired **and**
 - are medically fit for anaesthesia and the procedure
- Use a proven femoral stem design rather than Austin Moore or Thompson stems for arthroplasties
- Use cemented implants in patients undergoing surgery with arthroplasty
- Consider an anterolateral approach in favour of a posterior approach when inserting a hemiarthroplasty
- Use extramedullary implants such as a sliding hip screw in preference to an intramedullary nail in patients with trochanteric fractures above and including the lesser trochanter (AO classification types A1 and A2)
- Use an intramedullary nail to treat patients with a subtrochanteric fracture

Multidisciplinary rehabilitation

Mobilisation strategies

- Offer a physiotherapy assessment and, unless medically or surgically contraindicated, mobilisation on the day after surgery.
- Offer mobilisation at least once a day and ensure regular physiotherapy review.

Early supported discharge

- Consider early supported discharge as part of the Hip Fracture Programme, provided the multidisciplinary team remains involved and the patient:
 - is medically stable **and**
 - has the mental ability to participate **and**
 - is able to transfer and mobilise short distances **and**
 - has not yet achieved their full rehabilitation potential.

Intermediate care

- Only consider intermediate care (continued rehabilitation in a community hospital or residential care unit) if all the following criteria are met:
 - intermediate care is included in the Hip Fracture Programme **and**
 - the Hip Fracture Programme team retains the clinical lead, including patient selection, agreement of length of stay and ongoing objectives for intermediate care **and**
 - the Hip Fracture Programme team retains the managerial lead, ensuring that intermediate care is not resourced as a substitute for an effective acute hospital Programme.

Patients admitted from care or nursing homes

- Patients admitted from care or nursing homes should not be excluded from a rehabilitation programme in the community or hospital, or as part of an early supported discharge programme.

Further information

Ordering information

You can download the following documents from www.nice.org.uk/guidance/CG124

- The NICE guideline – all the recommendations.
- A quick reference guide (this document) – a summary of the recommendations for healthcare professionals.
- ‘Understanding NICE guidance’ – a summary for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or ‘Understanding NICE guidance’, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk and quote:

- N2571 (quick reference guide)
- N2572 (‘Understanding NICE guidance’).

Implementation tools

NICE has developed tools to help organisations implement this guidance (see www.nice.org.uk/guidance/CG124).

Related NICE guidance

For information about NICE guidance that has been issued or is in development, see www.nice.org.uk

Published

- Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the secondary prevention of osteoporotic fragility fractures in postmenopausal women (amended). NICE technology appraisal guidance 161 (2011). Available from www.nice.org.uk/guidance/TA161

- Alendronate, etidronate, risedronate, raloxifene and strontium ranelate for the primary prevention of osteoporotic fragility fractures in postmenopausal women (amended). NICE technology appraisal guidance 160 (2011). Available from www.nice.org.uk/guidance/TA160
- Denosumab for the prevention of osteoporotic fractures in postmenopausal women. NICE technology appraisal guidance 204 (2010). Available from www.nice.org.uk/guidance/TA204
- Delirium. NICE clinical guideline 103 (2010). Available from www.nice.org.uk/guidance/CG103
- Venous thromboembolism – reducing the risk. NICE clinical guideline 92 (2010). Available from www.nice.org.uk/guidance/CG92
- Minimally invasive hip replacement. NICE interventional procedure guidance 363 (2010). Available from www.nice.org.uk/guidance/IPG363
- Surgical site infection. NICE clinical guideline 74 (2008). Available from www.nice.org.uk/guidance/CG74
- Dementia. NICE clinical guideline 42 (2006) Available from www.nice.org.uk/guidance/CG42
- Nutrition support in adults. NICE clinical guideline 32 (2006). Available from www.nice.org.uk/guidance/CG32
- Pressure ulcers. NICE clinical guideline 29 (2005). Available from www.nice.org.uk/guidance/CG29
- Falls. NICE clinical guideline 21 (2004). Available from www.nice.org.uk/guidance/CG21

- Preoperative tests. NICE clinical guideline 3 (2003). Available from www.nice.org.uk/guidance/CG3
- Guidance on the use of metal on metal hip resurfacing arthroplasty. NICE technology appraisal guidance 44 (2002). Available from www.nice.org.uk/guidance/TA44
- The selection of prostheses for primary total hip replacement. NICE technology appraisal guidance 2 (2000). Available from www.nice.org.uk/guidance/TA2

Under development

- Osteoporosis: risk assessment of people with osteoporosis. NICE clinical guideline. Publication date to be confirmed.

Updating the guideline

This guideline will be updated as needed, and information about the progress of any update will be available at www.nice.org.uk/guidance/CG124

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