

1                   **NATIONAL INSTITUTE FOR HEALTH AND CARE**  
2                   **EXCELLENCE**

3                   **Guideline**

4                   **Hip fracture: management**

5                   **Draft for consultation, October 2022**  
6

This is an update to NICE guideline CG124 (published June 2011). We have:

- reviewed the evidence on total hip replacement vs hemiarthroplasty and on femoral component design used for hemiarthroplasties
- updated recommendations 1.6.3 and 1.6.4.

**Who is it for?**

- Healthcare professionals
- Commissioners and providers
- Adults with hip fracture and their families and carers.

**What does it include?**

- the recommendations that have been updated
- related recommendations that have not been updated (shaded in grey and marked **[2011]** or **[2017]**), included here for context
- recommendations for research
- rationale and impact sections that explain why the committee made the 2022 recommendations and how they might affect practice.

Information about how the guideline was developed is on the [guideline's webpage](#). This includes the evidence reviews, the scope, details of the committee and any declarations of interest.

### **Commenting on this update**

We have only reviewed the evidence for recommendations 1.6.3 and 1.6.5 to 1.6.7 marked **[2022]**. You are invited to comment on the updated and new recommendations, research recommendations, and rationale and impact section.

We have not reviewed the evidence for the recommendations marked **[2011]** and **[2017]** (shaded in grey) and cannot accept comments on them.

Sections of the guideline that have had no changes at all have been temporarily removed for this consultation and will be re-instated when the final guideline is published. See the [existing short version of the guideline](#).

See [update information](#) for a full explanation of what is being updated.

Full details of the evidence and the committee's discussion on the 2022 recommendations are in the [evidence reviews](#).

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## 1 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.

2

### 3 1.6 Surgical procedures

4 1.6.1 Operate on patients with the aim to allow them to fully weight bear  
5 (without restriction) in the immediate postoperative period. **[2011]**

6 1.6.2 Offer replacement arthroplasty (total hip replacement or hemiarthroplasty)  
7 to patients with a displaced intracapsular hip fracture. **[2017]**

8 1.6.3 Consider total hip replacement rather than hemiarthroplasty for patients  
9 with a displaced intracapsular hip fracture who:

- 10
- 11 • were able to walk independently out of doors with no more than the use  
12 of a stick **and**
  - 13 • do not have a condition or comorbidity that makes the procedure  
14 unsuitable for them (including cognitive impairments that put them at  
15 increased risk of dislocations) **and**
  - 16 • are expected to be able to carry out activities of daily living  
independently in the long term. **[2022]**

For a short explanation of why the committee made the 2022 recommendation and how it might affect practice, see the [rationale and impact section on total hip replacement vs hemiarthroplasty](#).

Full details of the evidence and the committee's discussion are in [evidence review B: total hip replacement vs hemiarthroplasty](#).

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2 1.6.4 Use cemented implants in patients undergoing surgery with arthroplasty.  
3 **[2011]**

4 The Association of Anaesthetists of Great Britain and Ireland, British Orthopaedic  
5 Association and British Geriatric Society have produced a [safety guideline on](#)  
6 [reducing the risk from cemented hemiarthroplasty for hip fracture](#). The guideline is  
7 not NICE accredited.

8 1.6.5 Hospitals should aim to use a single type of cemented femoral component  
9 for hemiarthroplasties as standard treatment for displaced intracapsular  
10 hip fracture management. **[2022]**

11 1.6.6 If equivalent cemented femoral component designs are available,  
12 organisations should take into account overall costs, including training  
13 needs, and how familiar the team is with the component. **[2022]**

14 1.6.7 Record long-term data on hemiarthroplasties, including patient-reported  
15 outcomes and adverse events, for submission to a national registry.  
16 **[2022]**

For a short explanation of why the committee made the 2022 recommendations and how they might affect practice, see the [rationale and impact section on femoral component design used for hemiarthroplasties](#).

Full details of the evidence and the committee's discussion are in [evidence review A: femoral component design used for hemiarthroplasties](#).

17

18 1.6.8 Consider an anterolateral approach in favour of a posterior approach  
19 when inserting a hemiarthroplasty. **[2011]**

- 1 1.6.9 Use extramedullary implants such as a sliding hip screw in preference to  
2 an intramedullary nail in patients with trochanteric fractures above and  
3 including the lesser trochanter (AO classification types A1 and A2). [2011]
- 4 1.6.10 Use an intramedullary nail to treat patients with a subtrochanteric fracture.  
5 [2011]

## 6 **Recommendations for research**

7 As part of the 2022 update the guideline committee made an additional 2 research  
8 recommendations.

### 9 **Key recommendations for research**

#### 10 **1 Long-term effectiveness of total hip replacement**

11 What is the long-term clinical and cost-effectiveness for adults undergoing total hip  
12 replacement compared with hemiarthroplasty for displaced intracapsular hip  
13 fracture?

For a short explanation of why the committee made this recommendation see the [rationale section on total hip replacement vs hemiarthroplasty](#).

Full details of the evidence and the committee's discussion are in [evidence review B: total hip replacement vs hemiarthroplasty](#).

#### 14 **2 Femoral component design**

15 In adults undergoing hemiarthroplasty for displaced intracapsular hip fracture  
16 (including in different subgroups), which femoral component design has the best  
17 long-term outcomes?

For a short explanation of why the committee made this recommendation see the [rationale section on femoral component design used for hemiarthroplasties](#).

Full details of the evidence and the committee's discussion are in [evidence review A: femoral component design used for hemiarthroplasties](#).

## 1 **Rationale and impact**

2 These sections briefly explain why the committee made the recommendations and  
3 how they might affect practice.

## 4 **Total hip replacement vs hemiarthroplasty**

### 5 [Recommendation 1.6.3](#)

#### 6 **Why the committee made the recommendation**

7 The committee discussed the clinical evidence on total hip arthroplasty (THA) versus  
8 hemiarthroplasty. They agreed that although some studies showed greater benefits  
9 for THA, this was not clinically or statistically significant for most outcomes. However,  
10 a combination of the clinical evidence and the health economic model developed as  
11 part of the guideline indicated that THA may have some benefits and be more cost  
12 effective than hemiarthroplasty in the longer term. The committee noted that  
13 clinicians tend to offer hemiarthroplasty more often than THA and that the evidence  
14 was not strong enough for them to consider recommending THA to everyone with a  
15 displaced intracapsular fracture. Based on their clinical knowledge and experience,  
16 they discussed how the long-term outcomes considered in the health economic  
17 model may not be relevant to some people. For example, older people may not live  
18 long enough to experience the long-term benefits of THA, and people who are not  
19 very mobile may be less concerned about the potential consequences of having a  
20 hemiarthroplasty, such as wear on the acetabulum. The committee agreed that  
21 hemiarthroplasty was a less complicated procedure than THA and could result in  
22 lower dislocation rates and less blood loss.

23 The evidence on the potential long-term benefits of THA led the committee to  
24 recommend that clinicians should consider THA for some people but limit it to those  
25 who are most likely to benefit from it. This would give clinicians more discretion over  
26 who to offer THA to, give patients more choice and prevent the procedure being  
27 offered to some patients who may get the same, or more, benefit from  
28 hemiarthroplasty. People with cognitive impairment significant enough to increase  
29 their risk of dislocations are unlikely to benefit from THA. But the committee agreed  
30 that milder forms of cognitive impairment should not act as a barrier to THA.

1 The committee discussed the potential long-term benefit for THA in specific groups  
2 of patients, in particular younger age groups with fewer or less severe comorbidities.  
3 As the evidence did not provide much long-term data, and results were not reported  
4 for different age categories, it was agreed that further research should be carried out  
5 to inform future recommendations. A [research recommendation](#) was therefore  
6 included to highlight the importance of comparing the effectiveness of THA with  
7 hemiarthroplasty in the long term and determining the effect of each type of  
8 arthroplasty on different population subgroups.

### 9 **How the recommendation might affect practice**

10 The recommendation allows clinicians to use their discretion in deciding who is  
11 offered THA. It should prevent people with mild forms of cognitive impairment being  
12 excluded from THA unnecessarily. As more data becomes available on the long-term  
13 benefits of THA in specific subgroups, there may be an increase in the number of  
14 people who are considered for THA.

15 [Return to recommendations](#)

### 16 **Femoral component design used for hemiarthroplasties**

17 [Recommendations 1.6.5 to 1.6.7](#)

### 18 **Why the committee made the recommendations**

19 The committee discussed the evidence on people who had been given Thompson,  
20 Exeter/Unitrax or Exeter Trauma Stem (ETS) components and agreed that health-  
21 related quality of life, mobility, mortality, unplanned return to theatre and adverse-  
22 event outcomes were similar across all groups. The committee noted that although  
23 there were no cost-effectiveness studies, there was a large amount of variability in  
24 femoral component costs across the country for a given type of femoral component  
25 and between different types of femoral component.

26 The Thompson component was cheaper than the ETS or Exeter/Unitrax component,  
27 but the committee were aware of future regulatory changes requiring data about  
28 implants, meaning that some older designs are unlikely to be used in the future.  
29 Without further evidence on other cemented components currently in use, they were  
30 unable to recommend one femoral component over another.



1 To choose the most cost-effective option, the committee agreed it was important for  
2 hospitals to consider not only the cost of the component itself, but also the cost of  
3 training needs when switching to a new component, alongside any future costs  
4 relating to adverse outcomes. There may also be other considerations, in addition to  
5 costs. For example, some hospitals may choose to use a femoral component that is  
6 suitable for both hemiarthroplasty and total hip arthroplasty to allow consistency in  
7 practice. The committee thought it was important from a training and development  
8 perspective that medical teams become familiar with implanting one single type of  
9 component as standard. They agreed that more research was needed on the  
10 effectiveness of different components.

11 The committee agreed that while the observational evidence was for femoral  
12 components not used in the UK, it did emphasise the importance of registry data in  
13 exploring longer term adverse outcomes such as periprosthetic fracture in trauma  
14 patients who had undergone hemiarthroplasty. Recording data on hemiarthroplasties  
15 for submission to a national registry, such as the National Joint Registry, which  
16 already collects data on total hip arthroplasties, will help to provide real-world data  
17 on the long-term effectiveness and safety of different femoral components in trauma  
18 patients.

19 The committee commented that the 2011 recommendation to use a proven femoral  
20 component design (based on Orthopaedic Device Evaluation Panel ratings) came  
21 from evidence of people having elective surgery. They queried whether femoral  
22 component designs for elective patients who have arthritis were appropriate for  
23 trauma patients, given that this latter group were at greater risk of fracture due to  
24 weaker bones. Therefore, the committee drafted a research recommendation that  
25 would allow data for this fragility fracture population to be captured. Registry data  
26 could also be used to evaluate long-term effectiveness in specific subpopulations  
27 such as people from different ethnic backgrounds and other groups for which there is  
28 currently no evidence (see [research recommendation 2](#)).

### 29 **How the recommendations might affect practice**

30 By recommending one femoral component as standard for hemiarthroplasties,  
31 surgical teams will become familiar operating with this prosthesis and need less  
32 training in different components. Hospitals or trusts will also choose a component

1 that provides the best value for money, but within the context of training  
2 requirements, team familiarity and overall costs.

3 The National Joint Registry already collects data on total hip arthroplasties.  
4 Collecting data on hemiarthroplasties in this, or a similar database, may require  
5 some extra administrative work. But the real-world data will be valuable in helping  
6 future decision makers choose the most clinically and cost-effective femoral  
7 component. Having further research on the effectiveness of different femoral  
8 components in people from different population groups will also help inform  
9 decisions and address health inequalities in this area.

10 [Return to recommendations](#)

## 11 **Update information**

12 **October 2022:** We have:

- 13 • reviewed the evidence on total hip replacement vs hemiarthroplasty and on  
14 femoral component design used for hemiarthroplasties
- 15 • updated recommendations 1.6.3 and 1.6.4.

16 Recommendations are marked **[2022]** if the evidence has been reviewed.

17 For recommendations shaded in grey, we have not reviewed the evidence.

18 **May 2017:** Recommendations have been updated on the surgical management of  
19 hip fracture. These are marked as **[2017]**. A link was added to recommendation  
20 1.6.5 on cemented implants to highlight safety guidance.

21 Where recommendations end **[2011]** or **[2011, amended 2014]**, the evidence has  
22 not been reviewed since the original guideline.

23 **March 2014:** The introduction to the full guideline and the wording of  
24 recommendation 1.1.1 have been amended to clarify how an occult fracture is  
25 identified and when an MRI scan should be done.

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