

The ProFHER (PROximal Fracture of the Humerus: Evaluation by Randomisation) trial – a pragmatic multicentre randomised controlled trial evaluating the clinical effectiveness and cost-effectiveness of surgical compared with non-surgical treatment for proximal fracture of the humerus in adults

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Plain English summary

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Plain English summary

Fracture of the proximal humerus (the top part of the upper arm bone) is common, particularly in older adults. Generally, less serious fractures are successfully treated by supporting the injured arm in a sling while the fracture mends. More serious fractures, in which two or more bony fragments are displaced, are often treated surgically. This usually involves putting the fracture fragments back in place and fixing them with plates and screws. In more complex fractures, the humeral head is sometimes replaced by an artificial joint. However, we identified a need for evidence to clarify whether surgery or non-surgical treatment is best for the more common types of displaced fracture.

We conducted a randomised controlled trial in 35 NHS hospitals that compared surgery with non-surgical treatment for these fractures. Of the 250 patients who enrolled into the trial, 125 were randomised to 'surgery' and 125 to 'not surgery'. Questionnaires, which collected data on patients' shoulder function and general health at 6, 12 and 24 months, were received back from 215 participants at 24 months' follow-up. Analysis of these questionnaires and the forms from hospitals showed that there were no important differences in shoulder function, general health, complications or treatment for complications between patients in the surgery group and those in the non-surgery group. Analysis of the treatment costs incurred over the 2 years showed that surgery also costs more. In summary, the evidence from this trial shows that current methods of surgery do not result in a better outcome for these patients and are more costly.

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