

## **Minimally invasive total hip replacement**

*NICE 'HealthTech  
guidance' advises  
the NHS on when  
and how new  
procedures can be  
used in clinical  
practice.*

This leaflet is about when and how minimally invasive total hip replacement can be used in the NHS to treat people with severe hip pain. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence).

This HealthTech guidance makes recommendations on the safety of a procedure and how well it works. An interventional procedure is a test, treatment or surgery that involves a cut or puncture of the skin, or an endoscope to look inside the body, or energy sources such as X-rays, heat or ultrasound. The guidance does not cover whether or not the NHS should fund a procedure. Decisions about funding are taken by local NHS bodies (primary care trusts and hospital trusts) after considering how well the procedure works and whether it represents value for money for the NHS.

This leaflet is written to help people who have been offered this procedure to decide whether to agree (consent) to it or not. It does not describe disability arising from hip pain or the procedure in detail – a member of your healthcare team should also give you full information and advice about these. The leaflet includes some questions you may want to ask your doctor to help you reach a decision. Some sources of further information and support are on page 6.

### What has NICE said?

This procedure can be offered routinely as a treatment option for people with severe hip pain provided that doctors are sure that:

- the patient understands what is involved and agrees to the treatment, and
- the results of the procedure are monitored.

Patients should be offered this treatment by a team of healthcare professionals, including a surgeon who can offer both open and minimally invasive total hip replacement. Surgeons offering the procedure should have received special training in minimally invasive techniques.

NICE is asking doctors to send information about everyone who has the procedure and what happens to them afterwards to a database at the National Joint Registry ([www.njrcentre.org.uk](http://www.njrcentre.org.uk)) so that the safety of the procedure and/or how well it works can be checked over time.

*This procedure may not be the only possible treatment for disability arising from hip pain. Your healthcare team should talk to you about whether it is suitable for you and about any other treatment options available.*

## Minimally invasive total hip replacement

The procedure is not described in detail here – please talk to your surgeon for a full description.

The most common reason for needing a hip replacement is osteoarthritis in the hip joint. In osteoarthritis, the protective covering of the ends of the bones in a joint becomes worn away or damaged so that eventually bone is rubbing against bone. Before someone with osteoarthritis is offered a hip replacement, they are usually offered treatments that don't involve surgery. These might include painkillers, anti-inflammatory medicines and physiotherapy. If these don't help, the person may be offered a hip replacement operation.

The standard hip replacement involves making a large cut (usually 20–30 cm long) over the hip. Minimally invasive hip replacement in the UK usually involves making a single, smaller cut of typically 10 cm or less. Alternatively, cuts are made at the front and back of the hip. The procedure is carried out using specially designed surgical instruments, with the patient under general or epidural anaesthetic (a local anaesthetic injected into the spine). Care is taken to avoid damage to the muscles and tendons around the hip joint, although some muscles may need to be divided. The surgeon may use image guidance (for example, computer navigation) to improve precision.

A range of different artificial joints, which may be cemented or uncemented, are available for this procedure.

### **What does this mean for me?**

NICE has said that this procedure is safe enough and works well enough for use in the NHS. If your doctor thinks minimally invasive total hip replacement is a suitable treatment option for you, he or she should still make sure you understand the benefits and risks before asking you to agree to it.

### **You may want to ask the questions below**

- What does the procedure involve?
- What are the benefits I might get?
- How good are my chances of getting those benefits? Could having the procedure make me feel worse?
- Are there alternative procedures?
- What are the risks of the procedure?
- Are the risks minor or serious? How likely are they to happen?
- What care will I need after the operation?
- What happens if something goes wrong?
- What may happen if I don't have the procedure?

*You might decide to have this procedure, to have a different procedure, or not to have a procedure at all.*

## Summary of possible benefits and risks

Some of the benefits and risks seen in the studies considered by NICE are briefly described below. NICE looked at 10 studies on this procedure.

### How well does the procedure work?

A study of 759 patients (1000 hips) who had the procedure asked patients to fill in a questionnaire evaluating hip movement and ability to function on a scale of 0 to 100 points (higher scores better). It showed an average improvement from 34 points to 92 points at 37 months. In another study, the questionnaire was completed by 597 patients who had the procedure and 608 patients who had the standard procedure. No significant difference in results was found between the 2 procedures.

In a study of 219 patients, 88 of 103 patients (85%) who had the minimally invasive procedure and 96 of 105 patients (91%) who had the standard procedure were able to get up and about after 1 day.

In the study of 597 patients who had the minimally invasive procedure, the average length of time spent in hospital was significantly shorter than for the 608 patients who had the standard procedure.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that how well the procedure works should be assessed by long-term ability to function, length of hospital stay, need for painkillers, and blood loss.

### Risks and possible problems

A second procedure was needed in 30 patients in 3 studies involving a total of 1490 hips. In the study of 597 patients who had the minimally invasive procedure and 608 patients who had the standard procedure,

there was no significant difference in the number of complications. In the study of 759 patients (1000 hips), blood clots in the leg or lungs occurred in 12 procedures (average follow-up 37 months).

The UK National Joint Registry reported instances of 'calcar crack' (a crack in the thigh bone at the site of insertion of the artificial joint) in 95 of 19,041 patients who had the minimally invasive procedure and in 1185 of 306,625 patients who had the standard procedure. Fracture of the main part of the thigh bone was reported in 10 and 192 patients respectively, and fracture to the 'trochanteric region' (which forms part of the outside edge of the thigh bone) in 29 and 622 patients (less than 1% for all).

In the study of 759 patients (1000 hips), new bone forming in the soft tissue was reported an average of 37 months after the procedure in 198 hips (none were serious enough to need further treatment).

Disintegration of bone in the hip socket was reported in 8 of 70 hips X-rayed in the study of 70 patients (90 hips) at an average follow-up of 11 years.

As well as looking at these studies, NICE also asked expert advisers for their views. These advisers are clinical specialists in this field of medicine. The advisers said that known risks of the procedure include thigh bone fracture and hip dislocation caused by wrongly positioned implants. They listed damage to nerves and blood vessels because of limited surgical view during the procedure as a possible complication.

### **More information about hip pain**

NHS Choices ([www.nhs.uk](http://www.nhs.uk)) may be a good place to find out more. Your local patient advice and liaison service (usually known as PALS) may also be able to give you further information and support. For details of all NICE guidance on hip pain, visit our website at [www.nice.org.uk](http://www.nice.org.uk)

## About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider how well an interventional procedure works and how safe it is, and ask the opinions of expert advisers. This guidance applies to the whole of the NHS in England, Wales, Scotland and Northern Ireland. Staff working in the NHS are expected to follow this guidance.

*To find out more about NICE, its work and how it reaches decisions, see [www.nice.org.uk/aboutguidance](http://www.nice.org.uk/aboutguidance)*

*This leaflet is about 'minimally invasive total hip replacement'. This leaflet and the full guidance aimed at healthcare professionals are available at [www.nice.org.uk/guidance/HTG236](http://www.nice.org.uk/guidance/HTG236)*

*You can order printed copies of this leaflet from NICE publications (phone 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote reference N2329). The NICE website has a screen reader service called Browsealoud, which allows you to listen to our guidance. Click on the Browsealoud logo on the NICE website to use this service.*

*We encourage voluntary organisations, NHS organisations and clinicians to use text from this booklet in their own information about this procedure.*

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