PROCEDURE

Minimally invasive hip replacement

Minimally invasive hip replacement replaces a damaged hip joint through one or two smaller surgical cuts.

PURPOSE
Relieve hip pain and restore movement by replacing damaged joint

PROCEDURE TYPE
Therapeutic minimally invasive surgery

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
Spinal with sedation or general anaesthesia

HOW LONG IT TAKES
About one to two hours

PREPARATION
Fasting and medication instructions; arrange transport and home support

RECOVERY
Same day or overnight; no driving until cleared

MAIN RISKS
Infection, blood clots, dislocation, fracture

RESULTS
Implant position checked immediately; recovery assessed over weeks

Overview

Minimally invasive hip replacement is a form of total hip replacement performed through a smaller cut, or sometimes two small cuts. The surgeon removes the damaged ball at the top of your thigh bone and replaces it with an artificial part. The damaged socket in your pelvis is also replaced.

The implants are generally the same as those used in standard hip replacement. "Minimally invasive" describes how the surgeon reaches the joint, not the amount of joint being replaced.

Several approaches may be described as minimally invasive, including anterior, side, and posterior approaches. Each passes between or through different muscles. A smaller skin cut does not always mean less damage beneath the skin.

Possible early benefits include a smaller scar, less initial pain, and faster early movement for some people. These benefits are not guaranteed. Long-term implant function is generally more important than incision size, and accurate implant placement remains essential.

Why the procedure is performed

The procedure is intended to reduce pain and improve movement when a hip joint is badly damaged. Common reasons for hip replacement include osteoarthritis, inflammatory arthritis, loss of blood supply to the femoral head, and some hip fractures.

It may be considered when hip pain limits sleep, walking, work, or everyday activities and treatments such as exercise, walking aids, and pain medicine no longer provide enough relief.

The minimally invasive approach may support earlier recovery in selected people. It does not create a different artificial joint or guarantee a better long-term result than standard hip replacement.

Who should and should not have it

You may be considered for minimally invasive hip replacement if you need a total hip replacement, are medically fit for surgery, and your anatomy allows the surgeon to place the implants safely through a smaller opening.

It is not the best approach for everyone. A standard incision may give the surgeon better visibility and control in a complex operation. Factors that may make a minimally invasive approach less suitable include:

Surgery is usually delayed if you have an active infection, a wound near the planned incision, or a medical condition that is not stable enough for anaesthesia and recovery.

The surgeon's experience with the chosen approach matters. A larger incision may sometimes be needed during surgery if it becomes the safer way to position the implants.

- Major hip deformity or unusual anatomy
- Previous surgery around the same hip
- Very weak bone or a complicated fracture
- Revision surgery to replace an existing implant
- Body size or muscle bulk that limits safe access

How to prepare

Your treating facility's own instructions take priority because fasting rules, medicines, and admission arrangements differ.

Tell the surgical team about all prescription medicines, over-the-counter products, vitamins, and supplements you use. They will explain whether any need to be paused, especially blood thinners or medicines that affect blood sugar. Do not stop prescribed medicine without specific instructions.

You may be asked to:

Smoking can affect wound and bone healing. If you smoke, ask what support is available before surgery.

Tell the team if you become unwell, develop a skin infection, or have a cut near the hip before the operation.

- Stop eating and drinking at a stated time
- Shower using a particular skin cleanser
- Arrange transport home and help for the first few days
- Prepare a safe walking route and frequently used items at home
- Bring crutches or a walker if instructed

What happens during the procedure

You will usually have either a general anaesthetic, which makes you unconscious, or a spinal anaesthetic, which numbs your lower body. Sedation can help you relax or sleep during spinal anaesthesia.

The surgeon makes one short incision or, less often, two smaller incisions. The exact position depends on the surgical approach.

The damaged ball at the top of the thigh bone is removed. A metal stem is placed inside the bone, with a new ball attached. The damaged surface of the hip socket is prepared and fitted with a metal shell and a smooth liner.

The surgeon checks stability, leg length, movement, and implant position. Imaging may be used during some approaches. The incision is then closed and covered with a dressing.

The operation usually takes about one to two hours. It may take longer if the anatomy or implant placement is more complex than expected.

Recovery and what to expect afterward

Pain: Soreness, swelling, and bruising around the hip are expected at first. You will be offered pain relief. Pain should gradually become easier to manage rather than steadily worsen.

Eating: You can usually drink and then eat after the anaesthetic has worn off and nausea is controlled. Some pain medicines can cause constipation, so fluids, movement, and any recommended bowel medicine may help.

Activity: Staff will usually help you stand and walk with a frame or crutches on the day of surgery or the following day. Follow the weight-bearing and movement instructions given for your particular approach. Exercises help rebuild strength and reduce stiffness.

Some people go home the same day, while others stay overnight or longer. Continue wound care and blood-clot prevention exactly as instructed.

Driving: You cannot drive yourself home. Return to driving only when your surgical team has cleared you, you are no longer affected by sedating pain medicine, and you can safely control the vehicle and perform an emergency stop.

Work: Return depends on your recovery and job. Desk-based work may be possible within several weeks. Work involving lifting, climbing, prolonged standing, or driving usually requires more time and specific clearance.

Risks and possible complications

Hip replacement is major surgery even when performed through a smaller incision. Possible complications include:

Limited visibility through a small incision can make implant positioning or fracture prevention more difficult in some people. The surgeon may extend the incision if needed.

You may receive antibiotics and measures to reduce blood clots, such as early walking, compression devices, or medicine. Follow the plan provided by your surgical team.

- Infection of the wound or deeper tissues around the implant
- Blood clots in the leg or lungs
- Dislocation, where the new ball comes out of the socket
- Fracture of the thigh bone or pelvis
- Injury to nearby nerves or blood vessels

- A difference in leg length
- Implant loosening, wear, or movement
- Ongoing pain, weakness, or stiffness
- Anaesthetic complications

Results and follow up

An X-ray may be taken soon after surgery to check the position of the new joint. Pain relief and function are judged over the following weeks and months.

Routine follow-up may include a wound check, assessment of walking and movement, and later X-rays. Keep these appointments even if recovery seems to be going well.

Many people gain substantial pain relief and improved mobility after hip replacement. Recovery speed differs, and muscle strength can continue improving for months. Artificial hips can wear or loosen over time, so future review or revision surgery may eventually be needed.

Alternatives

Your options depend on the cause and severity of the joint damage, your health, and what you want treatment to achieve.

- Non-surgical treatment: Exercise, physiotherapy, activity changes, walking aids, pain medicine, and sometimes injections avoid surgical risks. They may reduce symptoms but do not replace a badly damaged joint.
- Standard hip replacement: This uses the same general types of implants through a larger opening. It may allow better visibility in complex cases. The scar may be longer, but long-term goals are similar and early recovery differences are not certain.
- Hip resurfacing: This preserves more thigh bone but is suitable only for selected people. It has specific risks, including femoral neck fracture and problems associated with metal-on-metal bearings.
- Joint-preserving surgery: Procedures such as osteotomy reshape or reposition bone. They apply to selected structural problems and are less likely to help advanced joint damage.

- No surgery for now: You can continue symptom management and reconsider surgery later. Pain and loss of function may continue or increase, but progression is not identical for everyone.

When to call your healthcare team

Contact your surgical team promptly for:

Call emergency services for chest pain, sudden trouble breathing, coughing up blood, fainting, or sudden severe hip pain with an obvious deformity. Do not try to force a possibly dislocated hip back into place.

Questions about dressings, exercises, medicines, or a slow but steady recovery can usually wait for routine contact or a scheduled follow-up appointment.

- Increasing redness, warmth, swelling, or drainage from the wound
- Fever or feeling increasingly unwell
- Pain that is becoming worse instead of gradually improving
- New calf pain or one-sided leg swelling
- New numbness, weakness, or a cold or unusually pale foot
- A fall or sudden hip pain that makes weight-bearing difficult

Common questions

Will I be asleep?

You may have a general anaesthetic and be fully unconscious. With spinal anaesthesia, your lower body is numb, and sedation may make you relaxed or sleepy.

Can I drive home?

No. Arrange for someone to take you home. You must wait until your team clears you to drive again.

How painful is it?

Pain and soreness are expected, especially during early movement. Pain relief, ice if advised, and gradual activity usually make it manageable. Worsening pain should be reported.

When will I know if it worked?

Implant position can be checked immediately, but pain relief, walking, and strength are

assessed over weeks and months.

Is a smaller incision always better?

No. Safe implant placement matters more than scar length. A standard incision may be safer for complex anatomy or revision surgery.

How long will the new hip last?

Many implants function for years, but no artificial joint lasts forever. Wear, loosening, activity, general health, and implant type can affect its lifespan.

Sources

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- American Academy of Orthopaedic Surgeons, OrthoInfo: Total Hip Replacement
- National Institute for Health and Care Excellence: Joint replacement-primary hip, knee and shoulder, guideline NG157
- NHS: How a hip replacement is done
- NHS: Recovering from a hip replacement
- American Association of Hip and Knee Surgeons: Total Hip Replacement