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Hip replacement

Surgery to replace a worn-out hip joint is very common. The usual reason that someone has a hip replacement is because they have very painful arthritis in their hip. It is also sometimes done to treat a broken hip (hip fracture) but this depends on where the hip has broken.

How do I know if I need a hip replacement?

This may seem a silly question but it is important to realise that a hip replacement is major surgery and so you should really only be considering it when you have run out of other options. A doctor can diagnose arthritis in your hip and they can tell you that a hip replacement is an option for treatment but only you can decide if the time is right for you.

The main reason for having the operation is that you have a lot of pain and stiffness that cannot he helped by other treatments. The pain and stiffness can affect your ability to walk, to climb stairs, to get out of a chair and to undertake normal everyday household activities.

Sometimes you will be aware of a grating or grinding feeling coming from your hip. This is called crepitus. Sometimes your hip just doesn't move as well as it used to.

Symptoms will often vary from day to day - sometimes for no apparent reason. This is really common.

Is there anything I can do to put off needing a hip replacement?

Usually you will have seen a physiotherapist and have exercises to do, as well as having been taking painkillers for the pain, before considering a hip replacement. Special hip exercises help to strengthen, stretch and stabilise the structures that support your hip. General exercise, such as walking or cycling, helps to reduce the pain. Swimming is particularly good as the water supports the weight of your body so you don't put as much strain on your joints. Exercise not only helps with the pain and stiffness but also means that, if the time does come when you need to have a hip replacement, you are likely to recover more quickly.

It is when painkillers and exercises have stopped helping that it is time to think about hip replacement surgery.

Hip replacement surgery

Dr Sarah Jarvis, 30th March 2022

Quality Standards for hip replacement

The National Institute for Health and Care Excellence (NICE) has issued a new Quality Standard relating to hip, knee and shoulder replacement. They recommend that if you're having a hip replacement:

- You should be given advice on 'prehabilitation' getting into the best possible physical shape before your surgery - when you are added to the waiting list for operation.
- You should be given tranexamic acid treatment (to minimise blood loss) during your operation.
- Your surgical team should pause twice during the operation to make absolutely sure your implant details are correct.
- You should be be given advice on rehabilitation after your surgery before you leave hospital after the operation.

See Further Reading and References below.

A hip replacement is done under anaesthetic. Usually you are given a general anaesthetic, so you are completely asleep during the operation. It is also sometimes done under a spinal anaesthetic, which means you are awake but completely numb from the waist down. The operation itself takes about two hours. The surgeon will make a cut (incision) about 20-25 cm long usually down the outside of your thigh, although increasingly surgeons are using an incision in your groin. Then they cut out the part of your hip joint that is being replaced. The hip joint is a 'ball and socket' joint; sometimes it's the 'ball' that needs to be replaced, sometimes the 'socket', but usually it's both.

What is involved in a hip replacement?

Hip replacements are usually performed by making a cut (incision) over the side of the hip and then cutting out the affected bone and replacing it with an artificial part (prosthesis). Some surgeons use minimally invasive techniques. This means that they make just one or two very small cuts instead of one long cut and use specially designed surgical instruments and telescopes. It is thought that there may be less blood loss, less pain and quicker healing with this technique but it is not proven. Your surgeon will discuss with you if this is available.

You will be able to go home once you are eating and drinking normally and are mobile enough to be safe where you are going after you leave hospital. You will have an X-ray before being discharged, to make sure that your hip replacement looks normal.

Recovering from a hip replacement

Staff on the ward will look after you when you come back from the operating theatre and you will usually be able to have something to drink within an hour or so after you get back to the ward. They will help you to get up and walk about as soon as possible – this will speed up your recovery and reduce the risk of complications such as a clot on the leg. They may help you get out of bed on the same day as your operation.

Once you've recovered from the effects of the anaesthetic you will be seen by a physiotherapist – usually the day after your operation. Your physiotherapist will help you to get back on your feet and show you exercises that you will need to do to strengthen your muscles.

While you're recovering, you will need to avoid certain movements. These include bending your hip too far, twisting your hip and turning too quickly. Your physiotherapist can explain how to adapt your movements, including how to bend and sit, to avoid damaging your new hip.

Most people are able to go home after three to five days. To begin with you will need crutches to walk with but you should be able to get rid of these (if you have been doing your exercises regularly) within four to six weeks.

Normally you can be back to light work and be able to drive after about six weeks.

Care after the operation

You will need to consider how you will be looked after once you have had the operation, as you are going to need support with day-to-day activities for a while. If you live alone this may mean needing to have a friend or relative to come to stay with you for a while or it might mean that you need to stay in a care home until you have got your mobility and independence back.

What are the main reasons for needing a hip replacement?

There are two main conditions that can end up with you needing a hip replacement:

- If you have arthritis in your hip:
 - Arthritis means inflammation of a joint.
 - Osteoarthritis is the most common cause of arthritis in the hip and the most common reason for needing a hip replacement.
 - Rheumatoid arthritis is a less common cause. About one person out of every 21 who has a hip replacement has rheumatoid arthritis.
 - There are other causes of arthritis that may lead you to needing a hip replacement.

- If you break your hip (hip fracture):
 - A hip fracture is a fracture of the top part of the thighbone (femur). The fracture can be of the head, of the neck or below the neck.
 - Usually a hip fracture is treated by an operation to screw the broken ends back together again. However, if it is the head of the femur that has broken, this is often treated by replacing the broken head of the femur with an artificial head of the femur (prosthesis). This is particularly the case if the broken bits have moved away from each other or if you already have arthritis in that hip joint.

Will I need any tests before I have a hip replacement?

It is common to be asked to attend a 'pre-admission' or 'pre-assessment' clinic before having an operation to replace your hip. The appointment for this clinic is usually six weeks or less before your operation. At this clinic a nurse will assess your fitness for your hip replacement.

You are likely to have the following tests performed:

- Blood tests to check that you aren't anaemic and that your kidneys and liver are working well enough for you to undergo the operation.
- Urine test to make sure you haven't got a urine infection and that there isn't any glucose in your urine.
- Blood pressure.
- Infection screen this includes looking for meticillin-resistant
 Staphylococcus aureus (MRSA). MRSA is a germ (bacterium) that is difficult to treat and can cause complications for a hip replacement.
- A heart tracing (electrocardiogram, or ECG).

You may have the chance to speak with an anaesthetist, physiotherapist, occupational therapist or social worker at this clinic but this isn't always possible.

Are there any other things to consider about hip replacement?

Risks and benefits

You should be given the chance to discuss the risks and benefits of the operation in detail and in language that you can understand. If you have other conditions, such as heart disease, diabetes or a tendency to deep vein thrombosis or if you are obese, you should also have explained to you how these things may increase the risks of the operation for you.

What type of anaesthetic will I need?

Hip replacement can be carried out under a general or spinal anaesthetic. You can find out more detail in our separate leaflet called Anaesthetic for Hip or Knee Replacement.

Are there different types of hip replacements?

Hip replacements can all be divided into two types:

- Total hip replacement (total hip arthroplasty):
 - This involves replacing both the 'ball' (femoral head) and the 'socket' (acetabulum) with artificial parts.
- Partial hip replacement (partial hip arthroplasty):
 - When either the 'ball' (femoral head) or the 'socket' (acetabulum) is replaced but not both.

The replacement part may be made of various materials, including metal, polyethylene and ceramic. They may be fixed in place using special cement (cemented) or they may not be fixed (uncemented) but designed so that the bone grows over them and fixes them in place that way. The 'socket' part is also sometimes called the 'cup' of the hip replacement.

Metal-on-metal hip resurfacing

Metal-on-metal hip resurfacing (MOMR) is another option. In this operation no part of the joint is removed completely but the surfaces of the ball and socket are removed. A specially designed metal cap is fitted over the head of the thighbone (femur) and another metal component is fitted into the socket (acetabulum). Re-do operations are more common and occur earlier than with hip replacements. MOMR is generally used for fewer patients but is still an acceptable option for younger people, especially men who are wanting to undertake vigorous sporting activity following their surgery (but see below).

Which type of hip replacement should I have?

Your surgeon will discuss this with you. It will depend on who you are. In other words, how old you are, whether you have any other medical conditions and what you want to be able to do once you have had your hip replaced. It will also depend on what types of hip replacements your surgeon is used to performing and which ones are used in their hospital. In the UK the National Institute for Health and Care Excellence (NICE) only recommends devices that are known to last at least 10 years in 95 out of every 100 people who have that type fitted.

All hip replacements can be divided into either cemented or uncemented.

Cemented hip replacement

In the UK more than 9 out of every 10 people who have a hip replacement have a cemented one:

- They fix well.
- It is usually possible to get up and move early after the operation.

Uncemented hip replacement

- Easier to re-do, making them possibly more suitable for younger people who are more likely to outlive their replacement.
- Take longer to fix in place so full weight bearing and mobilising are not possible as early as with cemented prostheses.

There is no perfect hip replacement that will suit everyone and some of the differences between all of the different types and makes of hip replacement parts aren't known, particularly how they perform in the long term. In many countries, registries have been set up so that anyone who has had a hip replacement is entered into the register. The information collected is used to monitor how their replacement is performing. In the UK patients also enter information about their health and quality of life before and after their operation.

Metal-on-metal hip replacement (MOMR)

This refers to total hip replacement (THR) and resurfacing, where both the artificial 'ball' (femoral head) and the 'socket' (acetabulum) are made of metal. These were designed to reduce the chances of the components wearing out, especially in younger people who need their joint replacement to last longer, as they are likely to live longer. Unfortunately this does not seem to be the case, especially with a particular THR called De Puy's ASR implant. This turned out not to last as long as other implants and has been withdrawn.

Those patients who have a De Puy ASR implant and any patient with an MOMR (THR or resurfacing) who is getting hip pain, should be seen every year to have a blood test and a magnetic resonance imaging (MRI) scan. These are done in order to monitor any effects of metal debris having been released from the metal ball rubbing on the metal cup or socket; it is not yet know what effects this has on the hip or what effects it might have on your general health. There has been some concern that MOMR may be associated with an increased risk of bladder cancer but the studies have given conflicting results.

Both types of MOMR are being used much less often, as a result of the concerns outlined above.

How long will my new joint last?

Because of advances in medical appliances and surgical techniques, hip replacements are now lasting for longer than they used to. A new study shows that about 3 in 5 people who have a hip replacement today can expect it to last for at least 25 years.

How long yours lasts will depend a bit on how hard it has to work. Keeping your weight down and doing exercises to keep the muscles around your hip strong are really important.

A hip replacement isn't a minor operation and there are risks. How big the risk is for you will depend on how old you are, how fit you are and whether or not you have any other medical problems, such as diabetes or obesity.

How successful will my hip replacement be?

The simple answer is likely to be very! There is lots of research that shows that patients who have a hip replacement are relieved of pain and disability. This has often had a huge effect on their quality of life and their ability to live independently.

There is less research on the outcome of metal-on-metal hip replacements (MOMR) as the studies aren't very long. It seems to be effective in young men but it is not known if it is as effective in young women. By young, this generally means people under the age of 50 years.

Will I need to be seen again after my hip replacement operation?

Within about eight weeks of your operation, you will be followed up by the hospital where you had your surgery. You should be reviewed again at least after seven years and then every three years. You may not have to go back to the hospital for these review appointments, as they may just involve having an X-ray at your local hospital and then a telephone conversation with someone from the team who did your operation.

What are the possible immediate complications following hip replacement?

Bleeding

Blood transfusion may be needed.

Pain

- This can be reduced by different anaesthetic techniques used at the time of your operation.
- It is important to make sure that you get adequate pain relief. You need to be able to move about and then start to walk as soon as you are able after your operation.

Venous thromboembolism

- A venous thromboembolism (VTE) is a blood clot inside a vein.
- All patients are given measures to prevent this happening, where it is safe to do so. This usually includes: medication, foot pumps and below-knee compression stockings.
- The most severe (but rare) form of thromboembolism is a pulmonary embolism (PE). The prevention measures reduce the risk of dying from a PE by 70%.
- Certain factors make it more likely that you may have a VTE. These
 include: you have already had a VTE; you are closely related to
 someone who has; you have cancer; you are having chemotherapy;
 you are obese.

Dislocation of the hip

- This can occur at any stage but is most likely in the early days and weeks after a hip replacement.
- It is important to follow the advice you will be given by your
 physiotherapist about the strengthening exercises you need to do
 and how to do certain movements for example, how to get in and
 out of a car to reduce the chance of this happening.

Other complications

These include:

- A urinary tract infection often occurs when people have had a tube (catheter) put in their bladder during the operation.
- Constipation can be caused by certain painkillers and being immobile.
- Chest infections are more likely following a general anaesthetic and in people who already have a lung condition, such as chronic obstructive pulmonary disease (COPD).
- Wound infection and wound breakdown (also hip joint infection see below).
- Breakage of a prosthesis.

Fracture - of the thighbone (femur) or the acetabulum.

What are the possible later complications following hip replacement?

Long-term complications include the hip replacement 'failing' and infection of the hip joint.

Failure

Hip replacements can wear out and when they do so they become loose or break - this is often referred to as hip replacement failure. You may then need a further operation (a 'revision') to correct this. It is often a much more complex operation. Needing to have your hip replacement revised is more likely the younger you are when you have it done in the first place.

90% of people who have their hip replaced in their 70s never need any further surgery on that hip. In contrast, 90% of people who have their hip replaced under the age of 50 will need to have it re-done. For people who have to have their hip replacement done again, most have run into problems around seven years after the original operation. The hip may start to hurt again, but it doesn't always, which is why it is important that you are followed up regularly (see above).

Infection

Infection of a hip replacement can be catastrophic. You are 18 times less likely to get an infection if the following are carried out (compared with conventional care):

- The operation taking place in an 'ultra-clean' theatre.
- The patient being given antibiotics at the start of the operation (and the use of antibiotic impregnated cement, if cement is used).
- Theatre staff wearing specially designed body exhaust suits or occlusive theatre clothing.

An infected hip prosthesis may need to be removed and it may not be safe or possible to replace it.

Further reading

- National Joint Registry
- Arthritis of the hip (end stage) hip replacement (total) and resurfacing arthroplasty; NICE Technology Appraisal Guidance, February 2014
- Evans JT, Evans JP, Walker RW, et al; How long does a hip replacement last? A systematic review and meta-analysis of case series and national registry reports with more than 15 years of follow-up. Lancet. 2019 Feb 16;393(10172):647-654. doi: 10.1016/S0140-6736(18)31665-9. Epub 2019 Feb 14.
- Joint replacement (primary): hip, knee and shoulder; NICE Clinical Guidance (June 2020)
- Joint replacement (primary): hip, knee and shoulder; NICE Quality standard, March 2022

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