Outcomes of Total Hip Replacement from North Sydney Orthopaedic Research Group

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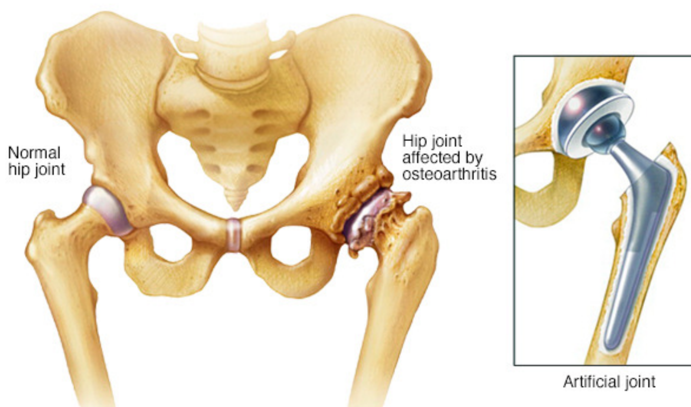
WHAT IS A HIP REPLACEMENT?

With arthritis, the weight bearing surfaces of the hip joint become worn away. They are no longer smooth and free running and this leads to stiffness and pain as the bone of the thigh bone (femur) grinds on the socket in the pelvis. A total hip replacement replaces these surfaces with plastic and metal. The hip end of the femur is replaced with a smooth metal component, which fits into the end of the thigh bone. This articulates with a cup which replaces the socket in the pelvis.



NSORG PATIENT REPORTED OUTCOMES OF TOTAL HIP REPLACEMENT

Since June 2015 the surgeons of the North Sydney Orthopaedic Research Group have been routinely collecting patient reported outcomes before and after surgery on all patients having hip or knee replacement. As at November 2019 outcomes have been completed on 3295 patients preoperatively, 2609 at 6 months and 2137 at 12 months after total hip replacement surgery.

Satisfaction

95% of patients reported that they would have the same procedure again under the same circumstances at 12 months. Patients reported to be satisfied or very satisfied with the outcome of their surgery in 94% at 6 months and 95% at 12 months after surgery. At 12 months 4% reported neutral satisfaction and <2% were disappointed.

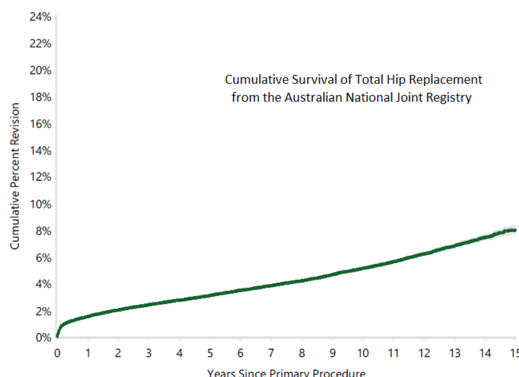
Pain

Pain scores (out of 100) improved from a mean of 47 before surgery to 89 at 6 months and 91 at 12 months. No or only mild pain with walking was reported by 20% of patients before surgery, 97% at 6 months and 98% at 12 months.

Activity Level

A subgroup of 160 patients were enrolled in a study where daily steps were recorded using a wrist worn activity monitor. At 6 months after surgery mean daily step count had improved by 130% over their preoperative level, and 70% of patients were more active than they were before surgery.

RESULTS FROM THE AUSTRALIAN NATIONAL JOINT REGISTRY



The Australian Joint Registry tracks every hip replacement that is performed in Australia for any further surgery that is required. There were 346,782 total hip replacements reported to the Registry as at 2016.

After hip replacement the percentage of all patients that have not had any revision surgery was 97% at 5 years, 95% at 10 years and 92% at 15 years. This bodes well for the long term survival of modern hip replacements.

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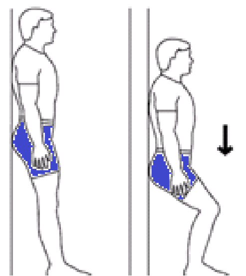
HOW TO PREPARE FOR YOUR SURGERY

You will need to attend the Mater Hospital preadmission clinic before your surgery. At this time you will be assessed by an Anaesthetist. If you live remotely this can be organised over the telephone. You should also inform your Surgeon and Anaesthetist of any allergies, medical conditions or previous treatments as this may affect your operation. You will also meet the nursing staff and physiotherapists to discuss your admission and treatment.

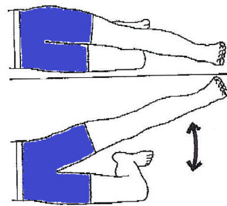
You should stop arthritis tablets for one week prior to surgery as they increase bleeding. Take only panadeine or panadol for pain relief during this period. Please notify your Surgeon and Anaesthetist in advance if you are taking any anticoagulants (blood thinners), hormone tablets or suffer from diabetes.

You must contact our office before you go into hospital if there is any evidence of pimples, ulcers or broken skin around the area to be operated on OR if you have a cold, cough or infection evident.

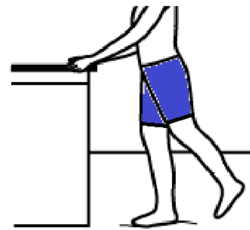
Some simple exercises can be beneficial in improving the strength of your leg before surgery which may assist your post operative recovery. Use of a stationary exercise bike is encouraged. Some other simple exercises are shown here. You may benefit from an appointment with a physiotherapist if you would like a more personalized program.



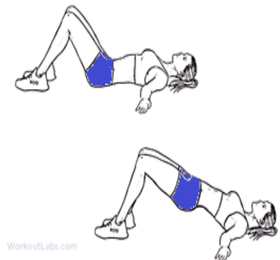
Wall squats from 0-90^0 of knee flexion.



Side Leg Lift.
Lying on your side with the bottom knee bent, slowly raise and lower your leg



Hip Extension.
Slowly lift your leg backward, keeping your knee straight.



Bridging. Slowly raise your buttocks from the bed, keeping your stomach muscles tight.

WHAT TO EXPECT IMMEDIATELY AFTER SURGERY

You are usually admitted to hospital on the morning of the surgery. The staff at the hospital will call you and let you know your admission time. You will need to take all relevant x-rays, current medications and their prescriptions.

On the day of surgery your surgeon will see you immediately before your operation. He will mark your leg with a pen. This is to ensure the correct leg is operated on. An anaesthetic will be administered in theatre. This may be a general anaesthetic (where you will be asleep) or a spinal block (where the area to be operated is completely numbed). You must discuss this with the anaesthetist. After you are anaesthetised, your skin will be cleaned with anti-septic solution and covered with sterile drapes. An incision (cut) will be made down the side of the hip of about 15cm in length. The hip joint, which is now visible, can be dislocated. The round head on the top of the thigh bone is removed and replaced with the metal component. The cup in the pelvis is replaced with a new cup lined with either plastic or ceramic. When your surgeon is satisfied with the position and movements of the hip, the tissue and skin can be closed with stitches (sutures). The sutures are dissolvable and do not need to be removed but the wound will remained covered until healing is complete (around 10 days).

When you wake up, if you have pain, it is important that you tell the staff. You will go for an X-ray the day after the operation. Physiotherapy involves exercises to improve the strength of the muscles and regain the range of motion of the hip. On the day of or the first day after surgery your physiotherapist will begin to assist you to get out of bed and walk a small distance. This will be progressed over the next few days, till you are independently mobile. In most instances you can take as much weight on your leg as comfortable. The exercising will cause some discomfort and swelling, however this is a normal part of the healing process. An ice pack can be used regularly to help reduce the pain and swelling.

You will stay in hospital for 3-5 days and then be discharged either to your own home or a rehabilitation hospital. The rehabilitation is organised after your surgery by the hospital staff. You will be reviewed by your surgeon in his rooms at 6 weeks after surgery. Return to work depends on the type of work you do and your ability to travel. Driving may be considered 2-4 weeks after hip surgery, once you have ceased all narcotic or opioid medications and feel able to drive safely.

RISKS & COMPLICATIONS OF TOTAL HIP REPLACEMENT

All procedures carry some risks and complications.

POTENTIAL COMPLICATIONS OF HIP REPLACEMENT

Dislocation: This occurs infrequently (about 0.5%), usually when your leg is in an awkward position. The risk for dislocation is greatest in the first few months after surgery while the tissues are healing. It can generally be treated with a closed manipulation, but on rare occasions requires further surgery.

Bleeding: A blood transfusion or iron tablets may occasionally be required (~5%). In order to minimise the risk of blood loss, your haemoglobin & iron levels will be assessed preoperatively. If these levels are low, then they will be corrected prior to surgery to minimise the risk of transfusion. Blood transfusions are very safe, with the Australian Blood Bank now quoting a risk of less than 1 in 1million chances of contracting HIV or hepatitis.

DVT:(deep vein thrombosis) is a blood clot in a vein (~5%). The risks of developing a DVT are greater after any surgery (especially bone surgery). DVT can pass in the blood stream and be deposited in the lungs (a pulmonary embolism – PE). The risk fo developing a PE is 0.5%. This is a very serious condition which affects your breathing. Blood thinning agents will be administered at the time of anaesthetic & for 6 weeks postoperatively. The mechanical methods include calf pumps & stockings to keep blood circulating around the leg. The single most effective means of limiting DVT is getting mobile as quickly as possible.

Prosthesis wear: With modern operating techniques and new implants, hip replacements last many years when performed with modern techniques and materials. In all likelihood one hip replacement will last a lifetime.

Leg length inequality: In most instances your leg length will be equal after surgery, but the operated leg can be shortened, or more commonly lengthened at the time of surgery. If the leg is short preoperatively, every effort will be made to equalize the leg lengths. If leg lengthening occurs it is generally only a few millimeters. It is important to note that the operated leg will often feel longer in the immediate post operative period. This is due to chronic tilting of the pelvis and usually resolved with time.

Heterotopic Ossification: Heterotopic ossification refers to the formation of bone in the soft tissue around the hip and very rarely causes problems. After surgery you may need to take some medications to prevent bone formation and your surgeon will discuss this with you.

Infection: This is possibly the most serious complication following joint replacement. There are several patient risk factors which increase the rate of infection such as obesity, diabetes, psoriasis and other skin conditions, active infection in a remote site (not your hip or knee), smoking, Rheumatoid arthritis, immunosuppression, previous surgery on the joint to be replaced, steroids, extreme age and poor nutrition.

Surgically, every effort is made to mitigate the risk of infection due to the seriousness of its development. This includes maximizing your health prior to surgery with the assistance of a physician if required. Any skin abrasions or active infections at the time of surgery will result in your surgery being postponed. You will be administered antibiotics before, during and after surgery. The surgery will be undertaken with a minimum number of staff to reduce the traffic in the theatre with special ventilation called laminar flow. Each member of the surgical team will wear a "space suit" to reduce the risk of cross contamination. Despite this, infections still occur. The wound site may become red, hot and painful. There may also be a discharge of fluid or pus. This is usually treated with antibiotics and an operation to washout the joint may be necessary. In rare cases, the prostheses may be removed and replaced at a later date. The infection can sometimes lead to sepsis (blood infection) and strong antibiotics are required.

Nerve injury: The incidence of nerve injury in primary total hip arthroplasty ranges from 0.5% to 3%. Injury to the sciatic nerve is most common.

Altered wound healing: the wound may become red, thickened and painful (keloid scar)

Other Complications: Nerve and blood vessel injury, bleeding, fracture, and stiffness can occur. In a small number of patients, some pain can continue or new pain can occur after surgery.

Death: This very rare complication may occur after any major surgery & any complication. Heart attacks, stroke and even death have been reported post hip replacement but these are extremely rare.

I have read & understood the procedure, risks and complications. I recognise this list of complications is not exhaustive but covers the major complications. I have also asked any questions and raised any immediate concerns I might have which have been answered to my satisfaction and understanding. I understand that I will have the opportunity to discuss the details of the anaesthesia with an anaesthetist before the procedure.

Signature…………………………………………………………Print Name…………………………………………………………………………Date…………………