GENERAL INFORMATION ON THE MINIMALLY INVASIVE DIRECT ANTERIOR APPROACH

Please read the general information on Total Hip Replacement Surgery in addition to below:

Total Hip Replacement is an extremely successful surgical procedure to improve a patient's quality of life when arthritic hip pain becomes debilitating.

Hip replacement surgery offers patients the ability to return to their daily (and some sporting) activities without pain and with improvement in hip flexibility and movement. Patients with a significant limp as a result of an arthritic hip will often walk normally again after recovering from surgery.

The **timing of surgery** is a quality of life decision and it is never to late to replace the hip joint provided ones general health is satisfactory.

There are various approaches that surgeons use to replace the arthritic hip.

All recognized surgical approaches work and the most important determining factor in ensuring a successful hip replacement that should last well over 20 - 25 years is for the patient to choose a surgeon who is well skilled in hip replacement surgery.

The Australian Joint Replacement Registry and many publications show clear data confirming that **more experienced surgeons have better patient outcomes.**

The most important factor in determining long-term success of a hip replacement is to choose a skilled surgeon and be guided by his/her recommendations.

Every patient would like to recover as quickly as possible with as little pain as possible. Surgical and Anaesthetic techniques have improved significantly and these improved techniques have allowed an easier recovery.

The **Minimally Invasive Direct Anterior Approach (often termed DAA or AMIS)** is an approach that lends itself to a quicker short-term recovery due to the fact that the surgical approach uses intermuscular planes allowing exposure of the hip joint without detaching muscle off bone. This allows a patient the ability to recover quicker and return to function quicker compared to other approaches.

There are many published articles *(references at end of this article*) that have confirmed that the anterior approach leads to a quicker short term recovery HOWEVER all published articles also confirm that after 12 months patients having had a successful hip replacement function equally well no matter what approach is used.

The most commonly used worldwide approach to hip surgery is the **Posterior Approach** (ie from the back) and published results show there is no significant difference between a well

done posterior approach and well done anterior approach at 12 months after surgery. The posterior approach requires splitting the gluteus maximus (buttock) muscle and detachment of the short external rotator muscles and then reattachment of these muscles/capsule and hence the slightly slower recovery compared to the anterior approach.

There are some short-term hip movement restrictions in the posterior approach (internal rotation of the hip beyond 90 degrees of flexion) for 6-8 weeks to prevent hip dislocation whilst the capsule/muscle repair recovers. The anterior approach is inherently a very stable approach not requiring muscle repair and movement restriction. Patients usually can return to driving at an earlier stage if they have had an anterior approach.

IMPORTANT INFORMATION

As an experienced hip surgeon (over 22 years performing more than 6000 hip replacements) and I am very comfortable performing either the anterior or posterior approach for arthritic hip replacement surgery.

HOWEVER

Not all patients may be suitable for the anterior approach due to many factors including:

Obesity
Abnormal anatomy (such as Hip Dysplasia, Perthes, previous fractures, abnormal bone structure etc.)
Severe osteoporosis.
Significant muscular build resulting in very tight and limited joint visualization).
Significant leg length discrepancy.
Deficient bone requiring bone grafting or augmentation of the socket.
Specialised hip implants needing to replace the hip joint.
Most revision hip surgery unless a simple head/liner exchange.

The Responsible Approach :

Every patient I see has an individual assessment taking into account their hip pathology, degree of arthritis, day to day function, general health and body habitus. I will then advise what I believe to be the best surgical approach to achieve the best clinical outcome with the least chance of complication.

Whilst I would prefer from a general recovery perspective to perform an anterior approach it is MORE IMPORTANT to ensure a safe recovery with appropriate attention to the underlying problems at hand. If I feel that the anterior approach is not suitable I will perform a posterior approach AND will reassure the patient that whilst they may have a slightly slower recovery compared to the anterior approach, their LONG TERM function will be identical.

The Final Word……..

The key to a successful hip replacement with the best chance of a good functional outcome and the least chance of complications is to choose an experienced skilled hip surgeon. Whilst the Anterior Approach may afford a quicker short-term recovery, not all patients are suitable for this approach, yet be reassured that at 6-12 months the posterior approach performs equally as well.

General Information about your recovery following hip replacement using the Anterior Approach:

Before Surgery:

1. Please attend the pre-admission clinic for routine blood tests and a general health check.
2. Use the provided antiseptic liquid shampoo in the shower for 2 days prior and the morning of surgery and additionally rub the liquid over the wound area.
3. Cease all blood thinning medication warfarin, aspirin, plavix, fish oil, glucasamine and herbal medication as advised. If you are on long term blood thinning medication I will liase with your cardiologist / GP about the timing as to when to cease these medications and if you need alternative cover.
4. If you are due to have dental work, routine colonoscopy or prostate procedures, please have this done at least 4 weeks prior to your hip surgery.

The Surgery:

1. Admission is on the day of Surgery.
2. The Hospital will contact you regarding fasting and admission times.
3. You will meet the Anaesthetist and can discuss in detail the modes of anaesthesia and the pain relief protocol with him.
4. I have been working with the same Anaesthetic team and nursing team for over 20 years and everyone is well skilled in their roles.
5. I will always see you prior to surgery (when admitted) and will mark the skin around the hip I am replacing.
6. Surgery usually takes about 60-70 min.
7. Most patients will have a **spinal anaesthetic** combined with a light general anaesthetic or light sedation
8. A urinary catheter is inserted to prevent you having urinary retention from the spinal. The catheter is removed within 12-24hrs after surgery.
9. The spinal will wear off after about 4-5 hrs and you will regain muscle control but still should have good pain relief
10. Local Anaesthetic is injected around the wound providing added pain relief.
11. A surgical drain is left in the wound to drain excess blood and the drain is removed 12-24 hrs after surgery.
12. Intravenous **antibiotics** are administered for 24 hrs as a prophylaxis against developing an infection.

13. **Deep Vein Thrombosis Prophylaxis (DVT):**

Hip Replacement surgery carries a risk of developing a DVT. Patients are given medication to help prevent this complication together with calf compressors and early mobilisation.

The type of medication a patient is given will depend on their individual risk profile. The Australian Arthroplasty Society and the Australian Commission on Safety and Quality in Health Care Standards guidelines are used. Aspirin or Clexane, depending on your individual DVT risk profile, is used as a means to reduce DVT.

Calf compressors are applied to your legs whilst you rest in bed to prevent the formation of a DVT. I may ask you to wear a below knee TED stocking to reduce swelling and assist in reducing thrombosis however most patients will use calf compressors and early mobility.

14. **Pain relief:** Some patients may require a PCA (patient controlled analgesia) that allows further boluses of intravenous pain medication after surgery. Most patients seem to manage well with regular oral analgesics. It is best to reduce the strong morphine -based tablets as soon as practical.

15. Constipation (from the analgesics) can occur for a few days and you are encouraged to eat healthy foods. We can supplement this with medication to help the bowls work.

16. **Mobilisation** is the key to reduce complications including DVT and constipation. The physiotherapist will try and get you walking within 6-12 hrs after surgery and I encourage at least two walks a day. When you have the ability to get in and out of bed yourself, you should try and do a few more walks a day.

17. You will initially start walking with the physiotherapist who will use a walking frame for support and then when you are confident you will progress within 24-48 hrs onto crutches and then down to one crutch or a cane within 48-72 hrs.

18. Discharge to either home or inpatient rehab is dependent on how quickly you mobilise and recover. Please bring loose clothing (like a tracksuit or equivalent) to the hospital. The sooner you dress in normal cloths, the better you will feel. Everyone recovers at a different pace. Most patients are ready for discharge after 48-72 hrs but I never discharge anyone until they are confident and mobile.

19. Patients who prefer to attend In-Patient Rehab are discharged as soon as the rehab bed becomes available. This can be anywhere between 3-6 days after surgery as the rate limiting step is the bed availability in the rehab hospital. The majority of patients who have had the Anterior Approach prefer to go home and have some outpatient physiotherapy.

    There is no advantage to have in-patient vs outpatient rehab and studies have conclusively shown that the outcomes are the same.

20. **Physiotherapy** and muscle strengthening after surgery through the Anterior Approach is not that difficult and many occasions patients are happy with the instructions we give on how to strengthen muscles and do these exercises at home.

21. **Discharge Medication:** Patients are given medication for pain relief when they leave hospital. In addition, I recommend taking ONE 100mg Aspirin tablet every day for 4 weeks to thin the blood a little and prevent DVT's. Mobility is the key to preventing DVT's. If aspirin is contraindicated you will be prescribed a different blood thinner. If you need more potent medication due to your risk profile you will be discharged with Xeralto as the alternate blood thinner.

22. **The Wound:** The surgical wound is closed with absorbable sutures. Keep the wound dressing (Usually changed before discharge) on for a total of 2 weeks from the day of surgery. The dressing is waterproof for showering (not bathing or swimming). At 2 weeks peel the dressing off. You may find steri-strips (wound tape) and these can be peeled off. There may be a clear bit of suture material hanging out from each end of the wound. Simply cut this flush with the skin with a pair of scissors (no need to pull it out) as it is dissolving. There is no need for further dressings and you can now wet the wound directly.

23. You can start to apply Vit E cream/ sorbelene or moisturiser 3 weeks after surgery. Patients who have a tendency to form Keloid scars should apply Cicacare (purchased from a pharmacy) when the wound dressing is removed at 2 weeks.

24. **Driving:** You are free to drive as soon as you feel comfortable (Anterior Approach advantage). This usually is around 10 days after surgery. Start off by sitting in the car and ensuring you can use the brake and accelerator comfortably and then do a short drive in your neighbourhood together with another driver.

25. **Swimming:** You are able to get into a swimming pool 3 weeks after surgery with no wound covering. You can start hydrotherapy 1 week after surgery provided the hydrotherapist (usually inpatient) places extra waterproofing on the wound.)

26. I prefer that you use a walking stick or single crutch (in the opposite hand) for 4 weeks after surgery to allow the bone to attach securely to the hip prosthesis.

27. **Sports:** You can return to power walking 6 weeks after surgery, golf 6-8 weeks after surgery and tennis, squash and snow-skiing 3 months after surgery. You can run on a treadmill, grass or soft sand 3 months after surgery but do this in moderation. Avoid contact sports

28. **Flying:** Local interstate flying is OK from 5-7 days after surgery. Overseas travel should be delayed for a min of 6 weeks after surgery. I recommend using compression stockings and taking aspirin for 3 days when flying overseas as well as doing foot and ankle exercises during flight.

29. **Airport Security**: Your hip replacement may activate security alarms depending on the sensitivity of the alarm. You need to tell the security staff that you have a hip replacement if it activates the alarm. Unfortunately there is no official documentation that you can carry that airport security believe advising them of your replacement.

30. **MRI scans:** There are no future restrictions on any diagnostic test that you may need for any reason. Your hip implant is " investigation friendly" and you can have any tests you like without damaging the implant.

Rehabilitation following Hip Replacement:

Many patients DO NOT require formal inpatient rehabilitation and can be discharged home with outpatient physiotherapy and a home based exercise program. Studies have conclusively shown that there is NO difference in outcomes between inpatient and outpatient rehab.

There is a false perception that by not going to inpatient rehab your result will be inferior. This is simply NOT TRUE and many published studies have proven that home discharge is as good.
I encourage patients to go home following surgery however there are patients who benefit from inpatient rehab when home circumstances are not ideal or where extra medical attention is required.

ANTIBIOTIC POLICY FOR PROCEDURES FOLLOWING JOINT REPLACEMENT

The risk of getting an infection in your replaced joint is extremely rare following routine procedures such as dental work and colonoscopies.

DENTAL procedures: For routine dental cleaning after joint replacement surgery there is no need to take antibiotic prophylaxis. For major dental work within 3 months after a joint replacement (such as root canal etc) I recommend a single dose of 2gm amoxicillin 1 hour before provided you are not allergic to amoxil. It is not necessary to take antibiotics for any dental work after 3 months provided your health is reasonably good.

COLONOSCOPY, Prostate, Bladder or Gynaecological procedures after joint replacement
Routine colonoscopy without any major biopsies or risk of bleeding do not require prophylactic antibiotic cover.
Surgery to the bladder, bowel, gynaecological and prostate surgery require a single intravenous antibiotic dose that is administered by the surgeon at the time of the procedure. Please advise them that you have a joint replacement.

Risks associated with hip replacement surgery:

Naturally there are general anaesthetic risks which are extremely small and this will be discussed in more detail by your anaesthetist.

Risks specifically related to total hip replacement include the following:

Deep joint infection (less than 1%)
Deep vein thrombosis (1%)
Fracture of the femur or acetabulum (less than 1%)
Dislocation of the hip joint (less than 1%)
Leg length discrepancy (every effort is taken to ensure equal leg lengths. (occasionally one needs to lengthen the leg slightly in order to gain stability but this is extremely rare.)
Loosening of the prosthesis over time (less than 1%)
Chronic pain (less than 1%)
Excessive swelling and stiffness (less than 1%)
Injuries to arteries and veins (less than 1%)
Major nerve injury (less than 0.1%)
Stiffness of the joint (less than 1%)
Extra bone forming around the hip joint (heterotopic ossification, less than 1%)
Reaction to metal on metal bearing (1%)
Wear of the bearing components. We expect the bearings to last at least 25 years or more.

Whilst the above risks are not meant to scare you by any means, any operation always has a small risk attached however, you should be reassured by the fact that over 97% of total hip replacement and Resurfacing replacement surgery is successful if done by a skilful surgeon using tried and tested implants.

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