Queensland Orthopaedic Clinic

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OPERATION: Uni-compartment (Half) Knee Replacement

PROCEDURE: The knee is an important hinge joint and as it is weight-bearing can be prone to "wearing out". Arthritis is painful and disabling and you and your surgeon may have decided that a half knee replacement may be your best option. Like the tread of car tyre, in some patients only one half of the knee becomes worn. If the rest of the knee is still healthy, your surgeon may suggest having just a half knee replacement. The benefits of this are that the half knee replacement is intended to keep the healthy knee structures and is intended to restore normal knee motion and function. You may of course go on to have a total knee replacement in the future.

A Uni-compartmental knee replacement is a surgical procedure, in which the injured or damaged running surfaces of the knee are replaced with artificial parts which are secured to the bone.

If you have any X-rays of your own please remember to bring them with you to the hospital.

You will be seen by the surgeon before the operation. They will take this opportunity to draw (mark with a felt pen) on your leg. This is to make sure the correct leg is operated on. If you have any questions, this might be a good time to ask them.

An anaesthetic will be administered in theatre. This may be a general anaesthetic (where you will be asleep) or a local block (e.g. where you are awake but the area to be operated is completely numbed). You must discuss this with the anaesthetist.

A tight inflatable band (a tourniquet) may be placed across the top of the thigh to limit the bleeding. Your skin will be cleaned with anti-septic solution and covered with clean towels (drapes). The surgeon will make a cut (an incision) down the affected side of the knee. The knee capsule (the tough, gristle-like tissue around the knee) which is then visible can be cut. From here, the surgeon can trim the ends of the thigh bone (femur) and leg bone (tibia) using a special bone saw. Surgeon uses computerized navigation method to make accurate cuts and create accurate alignment of your new half-knee.

Using measuring devices the new artificial knee joints are fitted into position. The implants have an outer alloy metal casing with a "polyethylene" bearing which sits on the tibia.

When the surgeon is happy with the position and movements of the knee, the tissue and skin can be closed. This may be done with absorbable stiches (as stitches are absorbable, there will be no need to remove stiches).

When you wake up, you will have a padded bandage around the knee. If you are in pain, please ask for pain killers. You may have pain catheter in place in mid thigh that would help to minimize post-operative pain without affecting your strength.

You will go for an X-ray the day after the operation and will be encouraged to stand and take a few steps.

You will be visited by the physiotherapy team, who will suggest exercises for you. It is important to do these (as pain allows).

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ALTERNATIVE PROCEDURE:

Other alternatives include –

Non-operative methods	Operative methods
Losing weight,	Arthroscopy
stopping strenuous exercises or work,	Cartilage transplant,
Physiotherapy and gentle exercises,	High tibial osteotomy
Medicines, such as anti-inflammatory drugs	Total knee replacement
(e.g. ibuprofen or steroids),	
Using a stick or a crutch,	
Using a knee brace	

Some of the above are not appropriate if you want to regain as much physical activity as possible, but you should discuss all possibilities with your surgeon.

RISKS

As with all procedures, this carries some risks and complications.

COMMON: (2-5%)

Pain: the knee will be sore after the operation. If you are in pain, it's important to tell staff so that medicines can be given. Pain will improve with time. Rarely, pain will be a chronic problem & may be due to any of the other complications listed below, or, for no obvious reason. Rarely, some replaced knees can remain painful.

Bleeding: A blood transfusion or iron tablets may occasionally be required. Rarely, the bleeding may form a blood clot or large bruise within the knee which may become painful and require an operation to remove it.

DVT (deep vein thrombosis) is a blood clot in a vein. The risks of developing a DVT are greater after any surgery (and especially bone surgery). DVT can pass in the blood stream and be deposited in the lungs (a pulmonary embolism – PE). This is a very serious condition which affects your breathing. Your surgeon may give you medication to try and limit the risk of DVTs from forming. Some centres will also ask you to wear stockings on your legs, while others may use foot pumps to keep blood circulating around the leg. Starting to walk and moving early is one of the best ways to prevent blood clots from forming

Knee stiffness: may occur after the operation, especially if the knee is stiff before the surgery. Manipulation of the joint (under general anaesthetic) may be necessary

Prosthesis wear: With modern operating techniques and new implants, knee replacements last many years. In some cases, they fail earlier. The reason is often unknown. The plastic bearing is the most commonly worn away part

Conversion to a Total Knee replacement: if the other parts of the knee look arthritic, the consultant may decide to proceed to a total replacement.

LESS COMMON: (1-2%)

Infection: You will be given antibiotics at the time of the operation and the procedure will also be performed in sterile conditions (theatre) with sterile equipment. Despite this infection still occur (1 to 2%). 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.

RARE: (<1%)

PE: Pulmonary embolism is the spread of a blood clot to the lungs and can affect your breathing. This can be fatal.

Altered wound healing: the wound may become red, thickened and painful (keloid scar) especially in Afro-Caribbeans.

Nerve Damage: efforts are made to prevent this, however damage to the small nerves of the knee is a risk. This may cause temporary or permanent altered sensation around the knee. Changed sensation to the outer half of the knee may be normal.

Bone Damage: bone may be broken when the prosthesis (false joint) is inserted. This may require fixation, either at time or at a later operation.

Blood vessel damage: the vessels at the back of the knee may rarely be damaged. may require further surgery

Death: This very rare complication may occur after any major surgery and from any of the above.

Progression of OA: this is where the arthritis may spread to the other parts of the knee. Either because of the operation or despite it.