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## Rehabilitation

Some patients require a more prolonged stay in hospital for intensive physiotherapy. This is usually arranged, if necessary in a rehabilitation hospital. Most patients will require some form of walking aid – crutches, frame or stick for the first six weeks but this is variable. It is entirely up to the patient's confidence although a stick outside the home is a good idea for the first three months as it alerts others that you are not fully able bodied. You should continue with the white stockings until the six week post-operative check, at which time, further X-rays are taken.

Most patients can safely drive 4 – 6 weeks after uni-compartmental knee replacement. Walking distance gradually increases at this time. Bowls and golf are resumed at 3 – 6 months. Running is never permitted at any time after the surgery.

## Results and Complications

Overall, 95% of patients are happy with their unicompartmental knee replacement. Approximately, 90 – 95% are relieved of the majority of their pain, deformity (crookedness) of the leg is usually corrected and mobility is improved. Range of motion averages 120 degrees or thereabouts but patients with poor motion prior to surgery seldom achieve a large improvement.

Should the prosthesis wear out or work loose, revision to a total knee replacement is the next step. This is complex surgery but usually with good results.

The prosthesis is a mechanical device and will wear, albeit slowly, over time. The prosthesis may also work loose and these two problems, along with wearing out of the remainder of the knee that was not replaced are reasons why the implant may eventually fail and need to be removed and replaced with a total knee replacement. Too high an activity level and soft bone (e.g. in rheumatoid arthritis) are factors that can act to bring forward the date of revision surgery. The results from the group in Oxford have shown a survivorship of 97% at 10 years.

Some of the important complications include infection, blood clots, inadvertent injury to blood vessels or nerves, problems regaining flexion or extension of the knee and difficulties with wound healing. Deep infec-

tion may require removal of the implant, prolonged antibiotics and later surgery to insert a new implant. Major clots are rare but can be fatal. All surgery and anaesthesia carries risks and is not entered into lightly. Dr Coolican and his team work very hard to prevent complications and it is important that you cooperate with all medical, nursing and physiotherapy staff to obtain an optimum result. If you have any questions concerning complications, please feel free to speak with Dr Coolican. If you develop unexplained calf pain, chest pain, fever or wound discharge after surgery, please notify Dr Coolican or one of his team.

## Precautions after Surgery

It is important to avoid jarring activities or any impact such as running or tennis. Weight gain should be minimized and heavy physical work, such as carrying loads in the garden should be avoided. It is important you tell your dentist that you have a prosthetic knee if you have any dental work performed, particularly in the first two years after surgery. Antibiotics can be given to prevent the rare complication of haematogenous infection following dental surgery. This is also the case for any open surgery. It is important that you have prompt antibiotic treatment of any skin infection or any urinary infection.

## Costs

Dr Coolican charges fees higher than the Medicare schedule. As a result, there is a gap for payment for your surgery which will be advised at the time of your booking.

If you have any questions about your proposed surgery, its risks, potential complications or likely benefits, please speak with Dr Coolican.

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## Unicompartmental Knee Replacement

Information for Patients

## Introduction

Unicompartmental knee replacement is major surgery and a decision to proceed with the operation is made only after a thorough evaluation of your symptoms and the likely risks and benefits of surgery.

Prior to booking surgery, Dr Coolican will question you on your general health. If there is a history of problems with your heart, lungs, blood pressure, circulation or other areas, you may be referred to an appropriate specialist for an operation on whether you are fit for surgery and whether any special precautions are required. If you are considered unfit or the specialist considers the risk of surgery to be great, it may still be possible to proceed with surgery but only if you and your relatives are aware of and are prepared to accept the risks.

Blood transfusion is rarely required with unicompartmental knee replacement unless carried out bilaterally.

You should stop taking any medication containing aspirin for 10 days prior to surgery. Non-steroidal anti-inflammatories should be stopped 10 days before surgery. Aspirin and non-steroidals interfere with platelets which are part of the blood clotting mechanism. If you are taking Methotrexate, this may be stopped a couple of weeks before surgery but should be discussed with Dr Coolican as it is sometimes safe to continue. You should continue with all your other medications and bring them to hospital so that the staff can arrange ongoing prescription of the appropriate dose. You must also bring your X-rays to hospital as these help determine the size of the prosthesis. If you are taking aspirin or other anti-coagulants for a special reason, it may be necessary to continue with this up to surgery but this should be discussed with Dr Coolican.

## What is Unicompartmental Knee Replacement?

Unicompartmental knee replacement is a surgical procedure involving the replacement of half of the tibiofemoral joint. This is almost always the inside or medial half of the joint but occasionally the lateral compartment is replaced.

Patients undergoing unicompartmental knee replacement usually fall into two groups.

1. Those with anteromedial arthritis. This is arthritis affecting the inside part of the front of the knee with the remainder of the joint being reasonably well preserved.
2. Those relatively young patients with osteoarthritis predominantly involving one compartment who are too young to expect a total knee replacement to out-survive them.

In these patients, unicompartmental knee replacement can provide satisfactory symptom relief for some years, possibly permanently but with a view to proceeding to total knee replacement when the unicompartmental components work loose or wear out or alternatively the remainder of the knee wears out.

## What are the other Options?

Patients with isolated medial (or lateral) compartment arthritis may:

1. Put up with their symptoms and postpone surgery as long as possible. This advice may be given to younger patients and patients whose symptoms are moderate.
2. For patients with medial arthritis, tibial osteotomy involves removal of a wedge of bone from the lateral side of the tibia, just below the knee or insertion of a medially based wedge. This can relieve symptoms for up to 10 years. It is more suitable for the relatively young and for those with heavy jobs or wishing to continue with impact sports such as tennis. The results of surgery are not quite as good in heavy patients and in general females do not respond as well to the operation as males. Unicompartmental knee replacement provides better pain relief than tibial osteotomy but places restrictions on activity level. For younger patients with lateral arthritis, a lower femoral osteotomy may be required. The results of this surgery mirror those of tibial osteotomy.
3. Undergoing total knee replacement. This resurfaces both the medial and lateral compartments as well as replacing part or all of the patellofemoral joint. This surgery is usually performed with the expectation that the implant has a 90 to 95 percent chance of lasting 10 years. Recovery after total knee replacement takes longer than after unicompartmental knee replacement and more bone is removed. However studies of implant survivorship show that total knee replacements last longer than unicompartmental knee replacements.
4. Undergo arthroscopic inspection of the joint. This may reveal arthroscopically treatable problems such as meniscal (cartilage) tears but if the predominant features at arthroscopy are those of arthritis, the procedure does not provide long term pain relief. However, arthroscopy is a low morbidity procedure from which patients recover quickly.

## Hospital

You are usually admitted to hospital the day before surgery or that day.

On the day of surgery, your leg is washed, shaved (if necessary), painted with Betadine and wrapped in a sterile towel. You will meet the anaesthetist prior to surgery who will discuss the anaesthetic. This a matter for discussion between yourself and the anaesthetist.

Surgery is carried out through an incision over the front of the knee and takes approximately one to two hours, depending on what is required. Small parts of the proximal end of the tibia and distal end of the femur are removed and replaced with metallic prostheses matched for size and side and plastic fixed to your bone with cement. The metallic components are made of medical grade stainless steel and the plastic is high density polyethylene.

A low pressure suction drain may be utilised to remove shed blood from the joint. Transfusion is rarely required.

Most patients recovering from unicompartmental knee replacement find the knee to be quite uncomfortable in the first two weeks. This steadily improves although the response to pain is variable. A variety of measures are used to control pain, including continuous epidural infusion (similar to that used in childbirth), patient controlled analgesia (where you push a button to deliver a small intravenous dose of medication), nerve block injections, ice and oral medication. It usually takes between three and six weeks before you will agree that the replaced knee feels better than prior to surgery. This is variable.

Rehabilitation begins the day after surgery, it is important to wriggle both ankles up and down whilst you are awake a few times every 20 minutes or so. This helps the calf muscle pump and prevents clots.

On the first postoperative day, the drain is removed, the dressing reduced and a small waterproof cover applied to the wound. Rehabilitation begins in earnest and involves supervised mobilising with the physiotherapist as well as a series of exercises to help achieve range of motion and to improve mobility and strength. Continuous passive motion (CPM) machines may be used in order to obtain knee flexion. These are electronically operated machines placed on the bed with the machine moving the knee up and down. Controls determine the degree of motion and you will hold a button to stop the machine if the knee is too painful.

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