ORTHOPAEDIC SURGEON

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Knee Replacement – Patient Information

This information sheet is designed to help you to understand what a knee replacement involves.

I perform knee replacements frequently, several times each week, and my commitment to you is to perform the surgery to the highest possible professional standards using the best available equipment, components, staff, and hospitals. If you have any problems or concerns at any stage please let me know so we can work together to achieve the best possible outcome.

Knee replacement is a commonly performed operation for severe knee symptoms usually caused by osteoarthritis.

Osteoarthritis is a gradual process in which the surfaces of the knee become damaged and wear away. The bones on either side of the knee joint are usually covered with a hard, smooth layer of cartilage that protects it and allows the surfaces to glide smoothly over each other. This surface can be damaged by injury or general wear and tear. When the process becomes advanced the underlying bone is uncovered. This causes pain, swelling and stiffness because the surface is no longer smooth and the nerve endings in the bone are exposed.

Osteoarthritis of the knee is a very common condition. It can occur in young people following injuries, but most commonly occurs in older people. Factors that cause osteoarthritis include previous knee injury, obesity, and a family history of osteoarthritis.

Knee replacement should be considered a last resort for the treatment of knee osteoarthritis. When deciding whether to have a knee replacement it is important for you to balance the severity of the current symptoms against the risks and expected outcomes from having surgery. Most people who have knee replacements are very happy, however, it is a big operation and the results can be variable.

Knee Replacement

You will be admitted to hospital either on the morning of your operation or the night before. The nursing staff will meet you on your arrival. One of the hospital medical doctors may review you during your stay to monitor your general health. The anaesthetist will see you early on the morning of your operation and go over your medical conditions and discuss the anaesthetic. I will see you on the day of your operation, before the surgery, and draw an arrow on your knee to confirm which side we are operating on and to answer any of your questions.

Your operation is performed under an **anaesthetic**. This can be either a spinal anaesthetic (injection in the back) or a general anaesthetic (completely asleep) or a combination of both.

The risks of the anaesthetic will be explained to you prior to your operation by the anaesthetist. Your risks associated with the anaesthetic are largely related to your general health, so please let us know about all of your medical history. In particular we need to know about any problems you may have experienced with previous anaesthetics, diabetes, heart conditions and any blood thinning tablets that you may be taking (such as Plavix, Clopidigrel and Warfarin). These will need to be stopped or replaced some days prior to surgery. I am usually happy for people to stay on Aspirin.

Your operation takes 1-2 hours to complete. During this time a tourniquet is compressing your thigh to prevent bleeding. It requires a long incision over the front of the knee. The muscles are split and the knee is exposed. The worn surfaces of the knee are removed and replaced with metal and plastic surfaces that are attached to the bone. The ends of the femur (thigh bone) and tibia (shin bone) are always replaced. The undersurface of the patella (knee cap) is sometimes replaced depending on how it looks during the operation. At the end of the operation I inject local anaesthetic into the knee to control the pain.

After the operation

Once the operation is completed I will call your contact person to let them know how it went. It is likely that you will be away from the ward for about four hours in total due to time preparing for the surgery and recovering afterwards.

After the operation you will wake up in the recovery room with a large bandage on your knee. There will be a thin plastic tube draining excess blood from the knee. After an hour in the recovery ward you will be transferred back to your room on the ward. It is common for your knee to become very sore for the first couple of days after the surgery. You will be given a button to press to deliver yourself doses of strong pain-relievers through your drip, directly into the vein. This is called a PCA. Let your nurse know if the PCA is not controlling your pain, as there are several other options available.

Occasionally some patients have problems passing urine after surgery. This is due to the anaesthetic. If this occurs a urinary **catheter** is used to drain your bladder. This is a thin rubber tube which is inserted into your bladder to allow urine to drain freely. Usually it is inserted on the ward after the operation, although occasionally it is inserted during the operation if we feel that there is a high risk of your bladder becoming overfilled. Most people find that the insertion of a catheter is only mildly uncomfortable and are quite relieved when their bladder is emptied. The risk of requiring a catheter is higher in people with previous urinary problems such as symptoms from prostate problems or incontinence so please let us know if you have had any problems with urination.

The morning after the operation a blood test will be done to check how much blood you have lost during your operation. If your blood count is low a **transfusion** may be recommended. This is rare and occurs in less than 5% of patients.

The drain will also be removed from your knee. The physiotherapists will see you and explain the exercises that you will need to perform. They will also get you to stand up and take your first steps on your new knee. Not only is it completely safe to stand on the knee, it is important that you are out of bed and moving as soon as possible.

You are likely to be in hospital for several days after the operation (five to six days is the average). This time is spent working to get the knee bending and straightening, and learning to walk on it again using a walking frame or crutches. It is normal for the knee to be very swollen and bruised after the operation

I will see you most days after the surgery. Occasionally I will have one of my colleagues covering for me if I am unavailable. In addition, a medical physician is often assigned to monitor your general health during your stay.

At the end of the time in hospital most people are able to walk using crutches and negotiate a few stairs. You should be able to largely look after yourself at home, however, it is always beneficial to have someone at home to help. If you are slow to recover from the surgery or if you have other medical problems or no help is available at home then we may recommend that you spend a week in one of the rehabilitation hospitals. This decision is usually made a couple of days after the operation when we can assess how quickly you are recovering. The most common **rehabilitation** hospital we use is Donvale Rehabilitation Hospital.

Before you go home the **physiotherapists** will give you series of exercises to perform every day. In addition they will help you organise ongoing outpatient physiotherapy. This can either be with the hospital physiotherapists (Physioworks and Hawthorn Physio) or with a physiotherapist of your own choice.

Before you leave hospital the nurses will usually arrange your **follow-up** appointment to see me again around four weeks after the operation. If the appointment isn't made please contact my office during working hours (ph. 94596611) and we will arrange it.

Going Home

A knee replacement is a big operation and it is normal for your knee to be sore for several weeks after the operation. However, the amount of pain experienced varies a lot between patients. You will be sent home with some pain-relieving tablets. You may need to take these for several weeks. It is best to cut back on the stronger tablets such as Oxycontin and Oxynorm/Endone as soon as possible. Often they can be replaced with Panadeine Forte or Tramadol and eventually with regular Paracetamol. Rest, elevation, and ice packs can also help to reduce the pain and swelling.

It is very important to regain as much movement of the knee as soon as possible after the surgery. While these exercises may cause some pain and swelling around the knee, they are safe to do and will not do any harm to your new knee.

If the knee starts to become increasingly painful after you have gone home try resting it, putting on an ice pack and taking some pain relief. If it doesn't settle or you develop any signs of an infection, such as a temperature or increasing redness around the knee, then contact my office (ph. 9459 6611), the hospital, your GP or local emergency department.

You may be sent home with an adhesive dressing or some plastic strips on your knee. These can all be removed about 10 days after the surgery. The wound should be sealed over by this stage and you are safe to shower or wash over it. If there is any ongoing bleeding or leaking from the wound or any signs of infection please contact my rooms. The stitches in your knee are all absorbable, and do not need to be removed. The ends of the stitch are left long at

either end of the wound, these are usually cut off flush with the skin before you leave hospital.

When I see you four weeks after the operation I will check the movement and strength of your knee. It is common at this stage for the knee to still be quite sore and swollen, but it should be steadily improving. At four weeks after your surgery, many people are still using one or two crutches but as you gain strength and balance your physiotherapist will advise you to wean yourself off them.

The full recovery from a knee replacement takes at least three months. While most patients are very happy with their knee the final result can be variable. The usual result is to have a knee which has no significant pain, however, most patients tell me that it aches a little when the weather changes and after exercise. It doesn't feel like a normal knee and often feels "clicky" or "mechanical". Most people can walk long distances on the flat and negotiate stairs. As far as sporting activities most people can play golf, bowls, gentle tennis, swim, and ride a bike. Very few people can run after a knee replacement. Kneeling is allowed but can be difficult or uncomfortable.

The final range of motion of the knee after a replacement is also variable. The average range is from full extension (straight) to about 115 degrees of bending. Very few knees ever gain full bending after replacement and it is possible to have less movement of the knee after replacement than beforehand.

Some **complications** of knee replacement:

(See the College pamphlet attached for a more complete list)

- Occasionally the final result from a knee replacement is not as good as we would like due to persisting **pain** and/or **stiffness**. In these cases we will investigate with x-rays and scans to try and find the reason. Sometimes we are able to find the problem and fix it with physiotherapy or injections or further surgery, including bending your knee for you under a brief anaesthetic. However, sometimes we cannot find a reason and the knee may remain permanently stiff or painful.

- **Infection** in the knee joint occurs in about 1 in 100 operations. It can require further surgery to wash out the infection. If the knee replacement becomes infected it may need to be completely removed and replaced with a new one. Infection is more common in patients who are overweight or who have diabetes.

- **DVT** (deep vein thrombosis) is a blood clot that forms in the leg veins and can occasionally break off and go to the lungs (pulmonary embolism). It can happen after any surgery and usually causes increasing pain in the calf muscle a few days after the surgery. To decrease your risk of a DVT you will be given injections (Clexane) after your surgery and we will show you how to continue these yourself for two weeks. DVT is more common in people who have had one before, so let us know if you have experienced a DVT previously.

- Tender **scars** and numb patches – the long skin incision will cut small skin nerves causing a tender spot or a numb area in the skin next to the scar. This tends to get smaller and less uncomfortable with time.

- **Nerve or blood vessel damage** is a very rare but very serious complication of knee replacement. If the nerves to the leg are damaged it can cause paralysis and loss of feeling. If the blood vessels are damaged they may need to be repaired and there is a risk that the leg may not get enough blood flow. Luckily this is extremely rare.

- As the knee replacement is a mechanical joint it can wear out or become loose over time. If this happens part or all of the knee replacement may need to be changed. It is very uncommon for this to happen in the first 10 years and most knee replacements last at least 15 to 20 years.

If you have any further questions after reading this information please contact my rooms and arrange another time to talk to me. I also suggest that you read the accompanying College of Surgeons handout on Knee Replacement for further details.

Checklist for Knee Replacement

- Confirm the correct date with the hospital – they will also call you a day or two before your operation.

- Contact your insurance company to confirm that you are covered for knee replacement. They will ask you for the Item Number for the operation, which is likely to be 49518.

- I am a “No-Gaps” surgeon, which means that I will not charge you any out-of-pocket costs for your operation. There may be additional costs from the anaesthetist, hospital and your insurance company – contact my rooms if you have any questions.

- Dental work – please visit your dentist to get any damaged or diseased teeth treated prior to knee replacement. This will decrease your risk of having an infected knee replacement.

- Preadmission blood tests – these usually are a routine series of blood tests and a urine sample (to check for infection). The tests should be done between one and two weeks prior to the surgery.

- Stop taking blood thinning tablets - for example Plavix and Warfarin will need to be stopped several days prior to the operation so call me to confirm details.

- Avoid infections – if you have any scratches or broken skin on your legs or any infections anywhere in your body (including urinary infections and dental infections) your surgery may need to be delayed. So let us know if you have any problems in the days before you come to hospital.

- Bring all of your x-rays to the hospital – we do not routinely keep patient x-rays so if you think we have yours please call to check.

- Bring all of your usual medications to the hospitals

If you have any problems or concerns about your knee replacement surgery please let me know so we can work together to get you the best possible outcome.