

Knee Replacement

- Total Knee Replacement
- Bilateral Knee Replacement
- Revision Knee Replacement
- Uni-Compartmental Knee Replacement

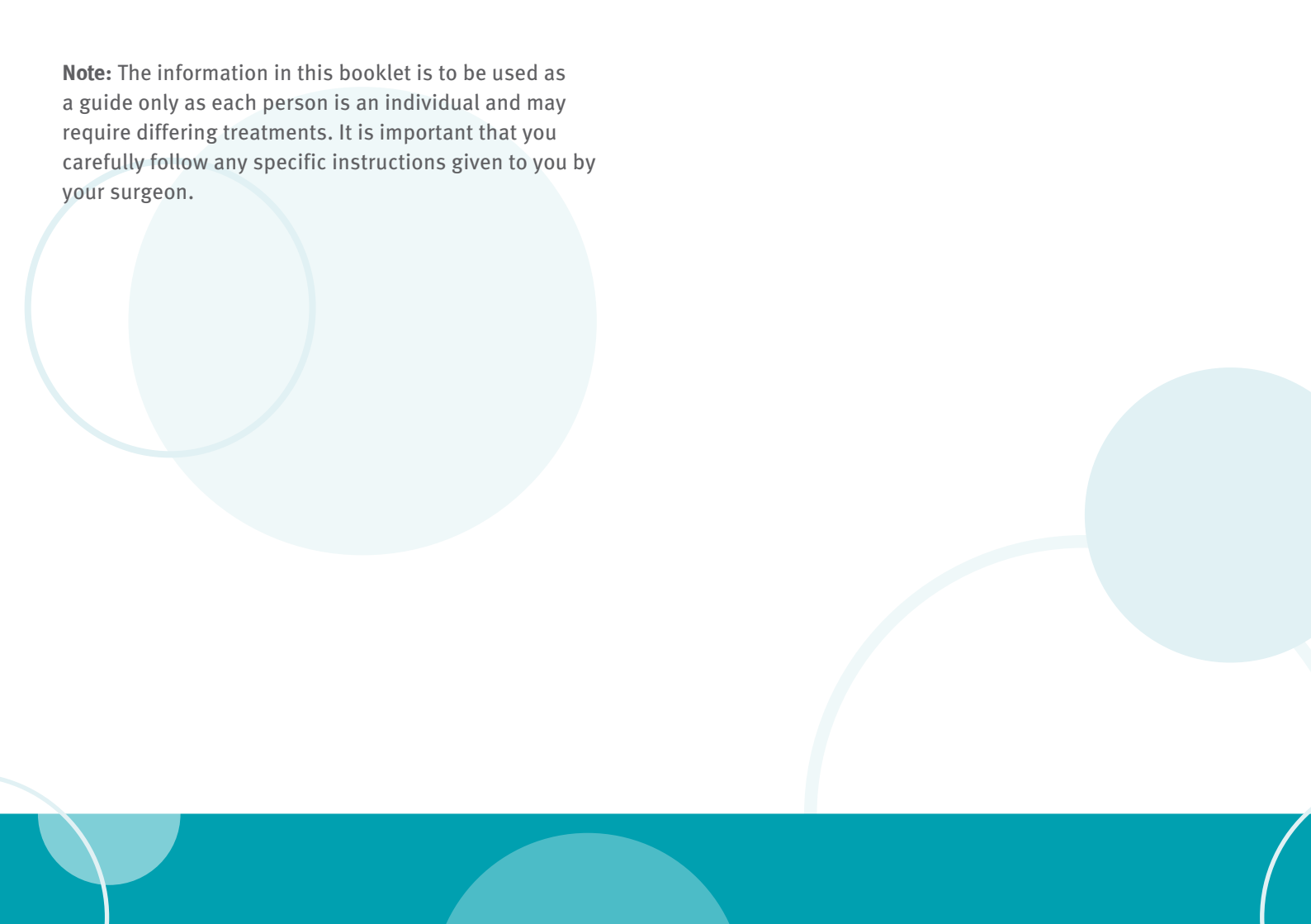


Patient Information



Nepean
PRIVATE HOSPITAL

Note: The information in this booklet is to be used as a guide only as each person is an individual and may require differing treatments. It is important that you carefully follow any specific instructions given to you by your surgeon.

The background of the page is white. It features several large, light blue circles of varying sizes. One large circle is on the left side, partially overlapping the text. Another large circle is on the right side. A thick teal bar runs horizontally across the bottom of the page. There are also some smaller, faint circles and arcs in the bottom left and bottom right corners.

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Welcome to Nepean Private Hospital

This booklet has been designed to guide you through your operation and to answer some of the questions patients most commonly ask. We understand that having surgery can be a very stressful experience and our goal is that this booklet, combined with the pre-admission class, will help to alleviate some of those feelings.

It is however, only a guideline and each person's treatment may differ. It is important that you follow the specific instructions given to you by your surgeon.

Doctors at Nepean Private Hospital perform many knee replacements each year. This means that you will be cared for by a team of well-trained staff who are trained in looking after your type of surgery.

Staff involved in your treatment will include doctors, nurses and physiotherapists.

Your stay in hospital will be approximately 5-7 days. To achieve this goal your cooperation and assistance is essential. Please bring this booklet into hospital with you so that you can read the relevant sections as required.

If you have any further questions throughout your hospital stay, please feel free to ask the staff on the ward and / or your surgeon. This is important because the better informed you are, the greater the likelihood that you will gain full benefit from your surgery.

A Look At The Knee

In order to better understand your knee surgery, it is important to understand how your knee is structured and how it works.

The knee is the largest joint in the body; it's made up of three bones. These include the tibia (the top end of the shinbones), the Femur (the lower end of the thigh bone) and the Patella (the kneecap).

Whilst the tibia and femur bones form a hinge like joint, the patella covers and protects the knee joint allowing side-to-side and lateral stability. All three bones are joined by ligaments and tendons which are surrounded by cartilage. Cartilage provides a smooth cushion and allows for easy movement whilst muscles and ligaments give the joint strength, flexibility and stability.

To keep the bones of your knee lined up so they work properly there are two sets of ligaments. The ligaments that run from bone to bone, are somewhat elastic and provide your knee with side-to-side and lateral stability.

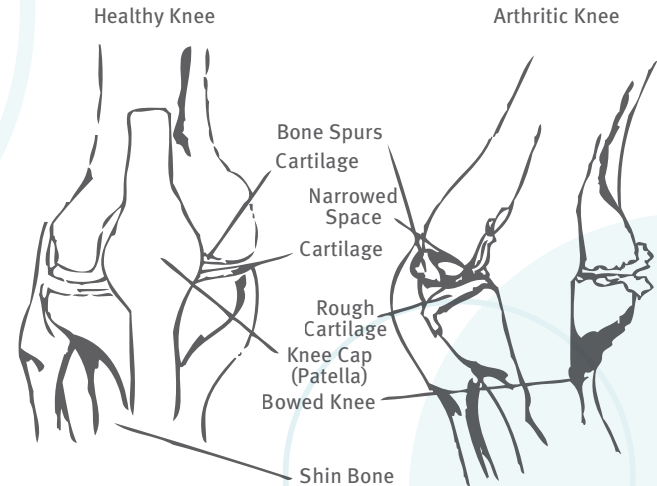
In arthritis for reasons that are still not entirely clear, the cartilage begins to thin and to crack and finally begins to break away. As the cushioning cartilage is eroded, the unprotected bones try to compensate by growing bony projections called spurs. As the joint continues to degenerate, the bone ends roughen and thicken to the point where the disfigurement of the joint is visible to the naked eye. In the later stages of degeneration, bone rubs against bone thus causing severe pain and restricted movement.



Diagram 1.0

The diagram 1.0 illustrates the differences between a healthy knee joint and one that has been ravaged by arthritis. Note the overall shape of knee, the bone spurs and the cartilage changes on the arthritic knee.

Wear & Tear Arthritis of the Knee



What Is a Knee Replacement?

Total Knee Replacement Surgery has become a regular part of the surgeons operating schedule. It is used for people suffering from pain, usually due to arthritis or trauma for whom conservative treatment is no longer effective.

Knee Replacement operations replace the worn surfaces of the knee joint with an artificial one so the overall function of the knee is improved. The technical term for the replacement of any joint is called an Arthroplasty.

The diagram on the next page shows a typical artificial joint. The modern knee replacement components are made from metal and hard plastic. The upper part of the prosthesis or knee implant is made from metal and replaces the curved portion of the bone at the end of the femur. The lower part of the prosthesis is also made from metal. The surface of the tibia is replaced with a smooth ultra-high-molecularweight polyethylene plastic component that functions as your cartilage once would have. You may be wondering why plastic is used.

Studies have shown that metal rubbing on metal is not as smooth or slippery as metal on plastic. Also metal on metal can cause harmful metallic debris to develop.

If the kneecap has been affected by disease or injury and can no longer slide along the groove in the femur smoothly, its surface can also be replaced.

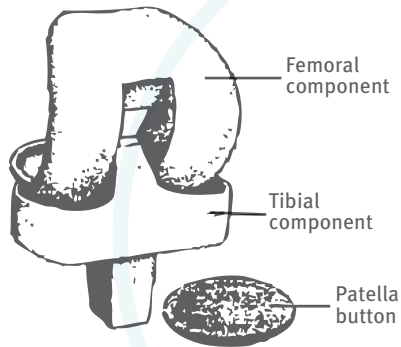
The implant may either be cemented to the bone, or fixed to the bone by making it grow into a specially prepared surface on the metal implant called “bone growth” or “porous coated implants”. Your surgeon will discuss these options with you.

Your operation may require either a partial or total knee replacement of the knee joint. Together with your doctor, you will decide which is the right treatment for you.

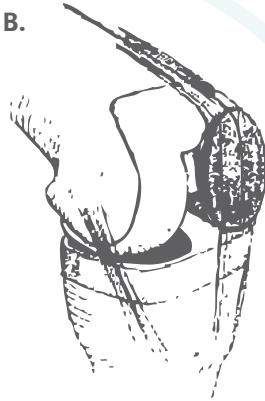
A. Knee Replacement components

B. End result of replacement

A.



B.



What Kind of Results Can One Expect From Knee Replacement Surgery?

No implant can ever entirely replace that of a healthy knee, however more than 90% of individuals following a knee replacement, experience a reduction in pain and an improvement in mobility.

This will not happen however without a large degree of commitment from you, the patient!

What Tests Will Need To Be Done Preoperatively?

A knee replacement is major surgery so both medical and nursing staff will need to know about your health. It is important you tell us about any health conditions you have and if you are taking any medications or herbal remedies.

Some information cannot be obtained by asking questions so your doctor may order any or all of the following tests to determine your existing medical condition.

- Chest X-ray
- Knee X-ray
- Electrocardiograph
- Blood Tests
- Urine Tests
- A physical examination by a doctor and or anaesthetist

What Should I Tell The Anaesthetist?

An anaesthetist will visit you prior to the surgery. Some clients are asked to visit the anaesthetist at their rooms prior to admission to hospital. Your anaesthetist will discuss the different types of anaesthetics available and the various pain medications. They may also request some of the tests above be undertaken.

Generally, the anaesthetist will want to know:

- How healthy you are, if you have had any recent illness and past operations
- Abnormal reactions to any drugs and allergies to food
- History of asthma, bronchitis, heart problems, sleep apnoea or any other medical conditions
- Whether you are taking any drugs at present including recreational, alcohol, cigarettes, and/or the pill
- If you have any loose teeth, crowns or dentures

The anaesthetist wants to have the best possible picture of you and your health so the most suitable anaesthetic can be planned. Please answer all the questions honestly as it is really about minimising risk to you.

What Else Will I Need To Do Before The Operation?

- Stop smoking at least 3 weeks before surgery. Ask your doctor for more information
- Write down a list of all medications that you are taking both prescription and non-prescription or request a list from your pharmacist
- Ask your surgeon if you need to stop taking any arthritic or aspirin type medications prior to your surgery. As generally **ALL ANTI-INFLAMMATORY AND ASPIRIN MEDICATIONS SHOULD BE STOPPED 2 WEEKS PRIOR TO YOUR OPERATION DATE**
- The night before and the morning of surgery you will need to have a chlorhexidine (Triclosan) shower. Do not wear any deodorant, perfume, talcum powder, make up or jewellery, except a wedding ring
- Your anaesthetist or the hospital will contact you and tell you when to fast from food and fluids

What Should I Bring To Hospital?

- Dressing gown
- Nighties and/or pyjamas (short pyjamas or loose legged pants are the best to allow staff easy access to your wound)

- Slippers with non-slip soles or shoes
- Toiletries
- Tissues and wet wipes
- Books and magazines
- Comfortable clothing to wear throughout the day
- **All** medications that you are currently taking in their original packaging
- **All** x-rays
- Glasses if you require them for reading
- Hearing aid/s if used at home with spare batteries and a container
- Special equipment if used at home eg. CPAP machine, special walking frame, or modified footwear

Please do not bring:

- Large amounts of cash
- Jewellery/or valuables
- Microwavable heat packs

Please understand that Nepean Private Hospital cannot be responsible for any missing items.

Any electrical equipment, eg. hairdryer or laptop, brought into the hospital needs to be checked by our electrician. Please contact your nurse to have this done.

What Happens On The Day Of Admission?

The booking clerk will give you your admission time when you ring the day before surgery.

You are generally admitted on the day of surgery unless requested by your surgeon to be admitted the day prior. You will be admitted to our Orthopaedic ward (Waratah ward), for enquiries about your progress, your family can contact the ward on 02 4732 7330.

What Happens Before My Operation?

On admission to the Orthopaedic Ward you will be weighed, shown to your room and orientated to the room and ward. The nurse will then proceed to check your vital signs; temperature, pulse, blood pressure, oxygen saturation % (often referred to as your 'obs'), blood supply to your feet ('neuro obs') and fill out a pre-operative checklist. These are all non-invasive tests.

The operative area will then be clipped of hair and the skin's integrity will be checked. Do not try and remove hair yourself prior to surgery as even superficial grazes can become infected and postpone your surgery. The area will then be cleaned with an antiseptic solution and prepared as your surgeon requests.

The nurse will fit you with special knee length tight stockings (called TEDs) that will improve the blood circulation and help prevent the formation of clots in your un-operated leg. You will wear one on the operative side the next day.

You will need to put on a theatre gown and your wedding ring will be taped over. All other jewellery will need to be removed and sent home and you will need to remove all nail polish.

You will be commenced on anticoagulant medication, which is to prevent complications with your circulation by thinning your blood. This may occur before or after your operation depending on what your surgeon requests. Let your family know you will be away from the ward for approximately 3-5 hours.

Please feel free to discuss your condition with those caring for you at anytime. It is important that you understand what is happening to you, so please ask any questions you may have.

What Happens After Surgery?

Operation times vary with each individual patient between 1.5-3 hours but you will be away from the ward approx 3-5 hours.

After your surgery you will be transferred to the recovery room. You will stay in the recovery room until you are awake and your pain has been managed so that you feel comfortable. You will then be transferred back to your room.

When you wake up you will have an oxygen mask on your face or nasal prongs and IV fluids running. The IV will stay in for approximately 24 hours to give you extra fluids, pain relief and antibiotics.

You may have a plastic drainage tube inserted into your joint. This allows blood to drain away from the operation site and helps prevent post-operative swelling. This is removed within a day or two after your surgery. A large dressing will be placed over the wound site.

You will have on a pair of compression sleeves known as SCDs on your legs. These blow up and down with air to keep your circulation moving and prevent DVT.

Once you are able to take sips of water you will be able to drink and eat as tolerated. It is advisable to avoid acidic drinks (eg. apple and orange drinks) as they may increase feelings of nausea.

The nurses will assist you with your toileting needs. If you are unable to pass urine 6-8 hours after surgery we will do a non-invasive ultrasound of your bladder to assess the need for insertion of a urinary catheter into your bladder, which will stay in until you are more mobile. It is not usual to have a bowel motion at this early stage but you should experience some bowel sounds and pass wind.

The nurses will closely monitor your vital signs and record your progress. Your operated leg will be checked for colour, warmth, movement sensation and feeling. It is **IMPORTANT** that you report any tingling, soreness and numbness to the nurses or doctors immediately. These assessments will continue overnight and may disturb your sleep.

The nursing staff may roll you on your side to relieve the pressure on your buttocks. When this happens a pillow will be placed between your legs to help support your knee. You are encouraged to be as independent as possible, so please assist nursing staff as much as you can.

Pain and nausea medication will be administered as you need it, so please let the staff know if you are feeling nauseous or if you have pain.

What Pain Relief Will I Get?

Pain relief is often managed by using Patient Controlled Analgesia. Nurses may refer to it as a PCA.

A PCA is an electric pump that has analgesia present in a syringe and is connected to your IV. When you have pain, you press a button which is connected to the machine delivering a pre-ordered dose of analgesia. The pump will beep to let you know that it has delivered the dose. The dose should start working within 5-10 minutes of the button being pressed. This means that you will have greater control over your analgesia.

ONLY YOU CAN PRESS THIS BUTTON.

Your anaesthetist will order the amount of medication that you will receive each time you press the button and this is programmed into the machine. The machine will not allow you to give yourself any more medication than the doctor has ordered. You may wish to give yourself a dose when you have pain and/or before you undertake painful activities such as getting out of bed or physiotherapy.

The PCA will be removed Day 1 after your surgery and oral pain relief will commence. Although you will receive regular pain relief throughout the day, you must let the nurses know when you require more, so extra can be given.

What Happens In The Days Following Surgery?

The nurse will closely monitor your pain, nausea and level of consciousness. If you have any concerns, please ask the nursing staff.

- You will have a blood test the day after surgery to check your blood count and electrolytes
- The physiotherapist will get you out of bed the day after surgery and begin walking with you, your health permitting. You will progress to smaller walking aids when the physiotherapist sees fit
- You will be assisted by the nurse to have a sponge in bed, as generally having a shower is unattainable on day 1; This is more likely to occur on day 2
- We will use ice packs intermittently on your knee to reduce pain and swelling
- The bulky dressing is usually removed with the drain a day or two after surgery and a smaller waterproof dressing will be applied
- No pillows are to be placed under the knee. Although this may be more comfortable for you, it will be harder

to straighten your knee and may cause a fixed flexion contracture with prolonged use

- Don't try and get out of bed on your own. Ask the staff for help until you have been safe to do so on your own by the physiotherapist
- A doppler test (ultrasound) may be done day 3-5 after surgery to rule out any chance of a DVT in your legs
- You will be discharged when your surgeon is satisfied that you are medically fit, your wound is healing and you have achieved the expected physiotherapy outcomes set for this procedure.

The aim of physiotherapy after your knee replacement surgery is to obtain smooth movement of your knee, restore muscle strength, and return you to a normal gait.

Physiotherapy And Mobilisation

Moving in bed is encouraged. By using the overhead bar and your non-operated leg. This will enable you to lift and move in bed more easily.

Exercises

Deep breathing and coughing exercises are very important to prevent complications with your lungs such as infection and congestion. To do these exercises take 10 deep breaths, holding each for 3 seconds and follow this with a strong cough. You should plan to do these exercises at least 10 times per day (try to do this every hour you are awake).

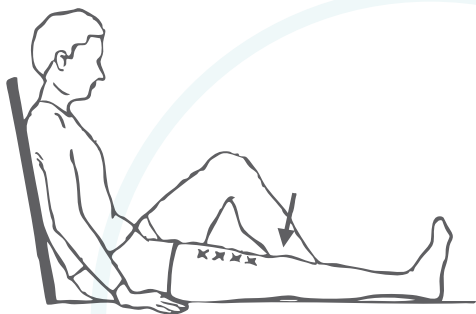
Foot and ankle exercises should also be undertaken as they are very important in aiding circulation and to reduce the risk of blood clots and help prevent stiffness. Move both ankles up and down 10 times, do it every hour. Examples of how to do these basic exercises are outlined in the diagrams on the next page. If you are unsure of how to do these exercises please ask the physiotherapist for assistance.

Physiotherapy begins soon after surgery with exercises in bed. Your Physiotherapist will go through a number of exercises with you to improve your strength and flexibility.

Over the next couple of days you will be introduced to the following exercises. If you do not know how to correctly undertake these exercises please ask the Physiotherapist for help. You should plan to do these exercises 4 times per day.

As you improve, your Physiotherapist may introduce more challenging exercises.

Knee Strengthening Exercise Program



Knee Range of Motion



Ankle Range of Motion Exercises

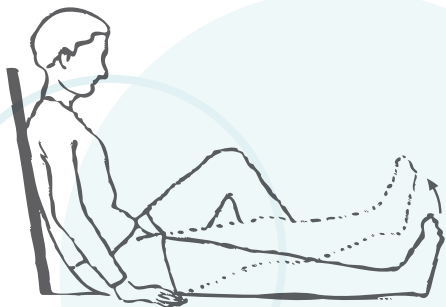


Hold for 3 - 5 seconds

Knee Flexion

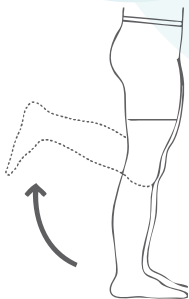


Straight Leg Raises



Hold for 3 - 5 seconds

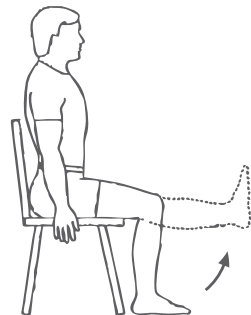
Standing Knee Flexion



Hold for 3 - 5 seconds

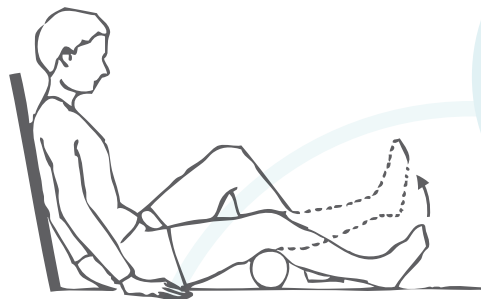
However before you can do the exercises such as the standing mini squat you first have to be able to get out of bed.

Knee Extension



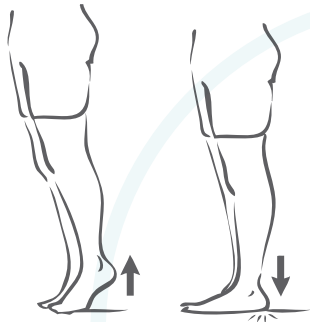
Hold for 3 - 5 seconds

Inner Range Quadriceps



Hold for 3 - 5 seconds

Standing Heel Raises



Standing Mini Squats



Getting in and out of bed

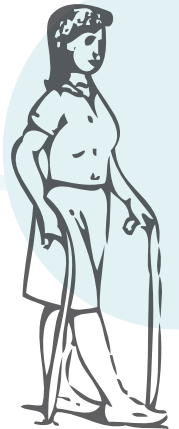
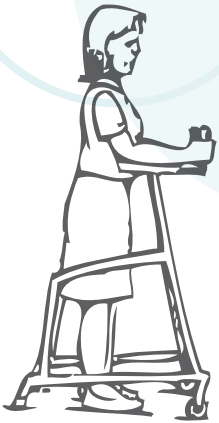
The nurse and physiotherapist will stand you beside the bed and assist you to sit in the chair usually on the first day after your operation. Your bed should be firm and be the correct height to ease getting in and out of. Sit up and stretch out the operated leg until it reaches the floor, bend your knee and push down through your hands onto the bed to stand up.



Walking

Once you can stand and balance normally, walking begins. The physiotherapist will teach you to walk with a frame or with other types of walking aids 1-2 days after surgery. At this time you will also be assisted to the bathroom and will sit out of bed.

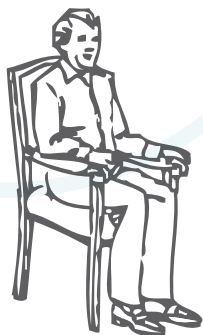
A walking frame or crutches will help assist you to walk and will relieve some of the weight on your operated leg. You will be told how much weight you can place on your operated leg by your surgeon. To use the walking frame, move the frame first, then the operated leg and then the other leg.



Sitting

Chairs with arm rests make it far easier to stand up during the early period after surgery due to the support the arm rest provides. When you sit, step back so that you can feel the chair behind your knees, let go of your walking aid and hold on to the arm rests of your chair. Lower your bottom down and slide the foot of your operated leg out to prevent a sudden bend.

It is recommended you shower seated for the first few weeks following surgery for your safety.



Managing Stairs

When walking up the stairs, remember to always put your non-operated leg up first, followed by your operated leg to the same step and walking aid last.

When walking down stairs, you will need to put the walking aid first, then the operated leg followed by the non-operated leg to the same step.

What Happens When I Go Home?

Discharge Planning

Planning for your discharge is very important, as you may need to make adjustments to your lifestyle and home.

Discharge planning starts on your admission. If you live alone, you may need assistance from family members. The role of the carer will be to provide you with meals, dry your feet, apply your compression stockings (6 weeks) and be the designated driver (6 weeks).

If care provided by another person is not possible then going to a rehabilitation facility may need to be considered. These are centres dedicated to providing you with physiotherapy and getting you ready to be discharged home to care for yourself. Stays at rehabilitation are generally one to two weeks in duration depending on your progress. If you would like to go to a rehabilitation centre please discuss this with your doctor and nurse on admission so process of booking a bed can be started early.

You may also need to rent some special equipment, for example a shower chair. Please discuss your needs during your stay with your Physiotherapist or nurse.

Transport

It is important to get in and out of the car safely. Use the front seat and push the seat back as far as possible. Back up to the seat, rest the crutches on the car, stand with your leg toward the car, sit back into the seat and swing legs into the car. Avoid driving long distances in one go, stop regularly to stretch your legs. Do not drive a car until you have discussed this with your surgeon.

Follow up Appointments

You will have a follow-up appointment at your doctor's surgery. Your doctor will tell you when they wish to see you and you're required to make an appointment at their rooms.

Exercise Program

Remember to maintain your exercise program at home and continue to use your walking aid when mobilising to protect your new joint until your doctor or physiotherapist tells you otherwise. You must still wear your TED stockings once you are home for approximately 6 weeks. Walk and exercise daily, avoid driving, jumping, running, and high impact sports. Overseas travel is not permitted (until cleared by your surgeon) due to the increased risk of DVT. Car journeys are allowed as long as you have numerous breaks along the way to stretch and exercise your legs.



What To Expect

- Some swelling and bruising to the area
- Some pain associated with the incision and after attending exercises

When To Contact The Doctor

- If you notice any new wound discharge or redness
- If you develop a temperature
- Any new swelling in the leg
- A dramatic increase in pain
- Severe sweating
- Breathlessness, chest pain or palpitations - contact your surgeon, GP or emergency department immediately

Precautions

If you intend to get any dental procedures done after your knee replacement surgery please check with your doctor if you need to take preventative antibiotics.

If you are going to travel by air to any destination within 6 weeks of having your surgery please contact your surgeon also to discuss any extra precautions that may be needed.

Notes:

Nepean Private Hospital is a 109 bed hospital which specialises in General Surgery, Womens Health, Maternity, Orthopaedics, Neurosurgery, ENT, Dental, Ophthalmology, Urology, Gastroenterology and Endoscopy.

Our friendly and highly trained staff and specialists foster a dynamic, team-based environment, which is reflected in the best clinical care and warm caring environment.

Our facilities include:

- Private Rooms
- Private Bathrooms
- Air Conditioning
- TV
- Phones
- Café on site
- Visitor Parking
- Radiology
- Pathology
- WiFi

Nepean Private Hospital is an accredited member of the Australian Council on Healthcare Standards (ACHS) and regularly undergoes an accreditation as part of our commitment to quality healthcare.





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A Healthscope Hospital

