Health
Northern NSW
Local Health District

Grafton Base Hospital

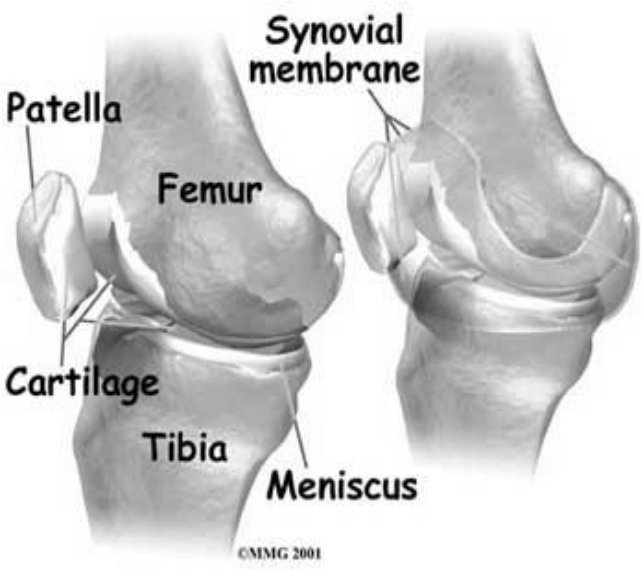
TOTAL KNEE REPLACEMENT

Handbook for total knee replacement

The knee is the largest joint in the body. It is a hinge joint. It relies on strong muscles and ligaments for support and stability.
The muscles and ligaments give the knee its side-to-side stability.

Free movement occurs in flexion (bending) and extension (straightening) only.
The **synovial** membrane provides the lubrication for the joint's articular cartilage, which normally lines the joint surfaces. This cartilage allows smooth pain free movement of the knee joint.

The main structures of a normal knee joint.



WHAT IS JOINT DAMAGE ?

Damage can occur in a knee joint for a variety of reasons. It may be due to abnormal development, injuries (including sport injuries) wear & tear or some disease process that produces joint damage, e.g. Rheumatoid or osteoarthritis.

OSTEOARTHRITIS is a degenerative joint disease affecting the cartilage lining at the ends of the bones and the underlying bone. Over time the cartilage deteriorates and becomes rough. Smooth movement of the joint is affected; the bone surfaces may actually touch, causing a grinding feeling.

RHEUMATOID ARTHRITIS is a chronic inflammatory, systemic disease. It primarily attacks the synovial linings of the joints, causing inflammation and swelling. As a result of the arthritic process, the linings become thickened and the fluid that is normally secreted in the joint will contain enzymes, which actually break down bone cartilage and tendons.

TRAUMA can also cause the development of arthritis. Damage to ligaments or joint surfaces may cause the joint to become unstable and subject to increased and abnormal stresses which causes further deterioration of the articular cartilage.

Poor alignment of bones following fractures may lead to abnormal wear patterns, resulting in premature joint break down, pain and reduced movement.
The end result of all of the above is increasing pain, stiffness and decreased joint function.

REASONS FOR SURGERY

A large number of people develop knee problems to some degree. The majority can be successfully managed without surgical intervention by Physiotherapy, weight control, orthotics, hydrotherapy, modifying leisure and sporting activities and simple medication.

Joint Replacement Surgery is a last resort for those people with severely damaged joints that cannot be successfully dealt with by such methods.

Surgery is performed to:

- reduce pain
- improve movement and function
- improve alignment and correct deformity
- improve stability

In other words, to improve the quality of your life.

WHAT IS A TOTAL KNEE REPLACEMENT ?

The Total Knee Replacement consists of 4 parts;

- The upper femoral component replaces the weight bearing surfaces of the femur (thigh bone) and has a groove in which the patella (knee cap) moves.

- The lower metal tibial component replaces the tibial (shin bone) weight bearing surfaces.

- A plastic spacer fits on to the tibial component to provide smooth movement between it and the metal femoral component.

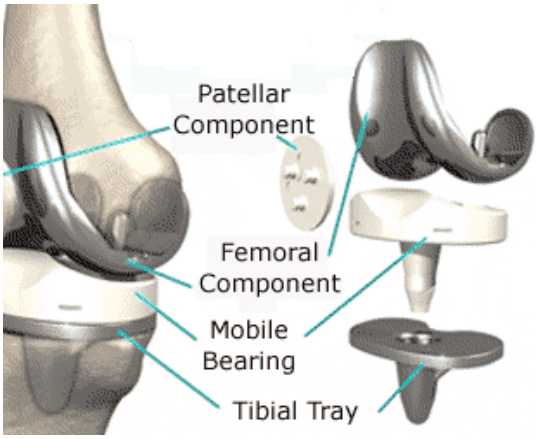
- A plastic button may be attached to the back of the patella (knee cap) to provide smooth movement between it and the groove in the upper femoral component. In some cases the natural patella can be left intact and will work very well with the prosthetic knee.

The metal components can be bonded to the bone in 2 ways.

- Bone Cement (like a strong glue) with instant fixation.

- New bone growth into the metal, which takes a number of weeks to gain its strength

There are numerous models and makes of these components. The surgeon makes a choice depending on their assessment of the individual needs.



The components of a Total Knee Replacement.

EXPECTED OUTCOMES

More than 90% of people experience good to excellent results following a Total Knee Replacement with regard to pain relief and improved range of movement.
This allows for easier walking, sitting, driving and coping with all activities of daily living with less difficulty.

POSSIBLE COMPLICATIONS

In a small percentage of people problems occur that require further intervention. For example:

- Infection (less than 1%). This will need to be treated with antibiotics and occasionally may need further surgery including possible removal of the joint.

- Loosening of one of the components over a period of time (sometimes associated with excessive use). Revision surgery is possible in most cases, with the implantation of a new component. However, this does mean another major surgical procedure.

- Wear & tear. Implanted knee prostheses may wear out and require revisions or replacements at a later date

- Very rarely, injury to the blood supply or out of control infection may lead to amputation of the leg. The risk is greater for patients who are elderly or in poor general health. The overall risk is about one patient in one thousand.

- A major nerve may be damaged leading to poor or no leg movement. Most minor nerve injuries heal well with time, and the nerves may recover completely.

- If the joint was extremely stiff prior to surgery, stiffness is still likely to be significant after surgery.

- Ongoing and unexplained pain.

- Deep vein thrombosis (DVT) may occur when blood becomes sluggish within the veins of the lower limbs, leading to clot formation (thrombosis). These clots can break away and go to the lungs. Blood clots on the lungs and other serious adverse events such as heart attack or strokes can be life threatening.

  This risk for DVT can be reduced by lower limb exercises, early mobilisation, anti-thrombolytic support stockings, or anti-coagulant medication (blood thinning medication).

- Stopping smoking and weight loss increases chances of having no major problems and improves wound healing.

The improved lifestyle after Joint Replacement can be well worth the risks and stress of surgery. It is your decision to go ahead and you need to discuss this with your doctor and family. The Rehabilitation phase following the surgery will take some time and effort on your part, but if everything goes well the end result should be a knee with less pain and better function than before. .

With current technology and design, the life of primary implants is at least fifteen to twenty years and possibly much longer. Despite that, one of the risks of knee replacement is early failure.

POSITIVE APPROACH

Preparing mentally for surgery is as important as preparing physically. We are fortunate to live in an age where Joint Replacement is possible. The staff at Grafton Base Hospital (GBH) are committed to providing you with the necessary care and support to enable you to achieve the best possible result from your new joint.

PRE-ADMISSION CLINIC

You will be required to attend a pre-admission clinic prior to your hospital admission, to assist in preparation for your surgery and discharge.

When you have been allocated a date for your surgery, the hospital will contact you with details of your pre-admission clinic appointment.

The clinic is held in the Surgical Services Unit at Grafton Base Hospital, in the same area where you booked in for surgery.

At the clinic you will be seen by a Nurse and the Anaesthetist.

You will be asked questions about your health as well as having the required cardiograph (ECG), X-rays blood and urine tests arranged.

The Anaesthetist will assess your overall health and aims to ensure you will be fit enough to undergo this major surgery. He will discuss the type of anaesthetic most appropriate for you and what medications you may need to cease before surgery, for example blood thinners, anti-inflammatory medication and Aspirin. Make sure you have a current list of your medications including strength and doses to bring with you to the clinic.

The Anaesthetist will also discuss the different options for the surgery regarding spinal or general anaesthetic. With your safety and post-operative comfort in mind we would normally strongly recommend a spinal where possible. A spinal is a bit safer and offers a much better more comfortable and rapid recovery than a general for at least the first 24 hours post op. Some people are put off the idea of a spinal anaesthetic due to worries about having to listen to the surgery. In most cases that isn't an issue- the Anaesthetist can still make a patient with a spinal block snooze through the surgery.

There will be an opportunity to discuss the type of anaesthetic and any other questions you may have regarding your surgery and anaesthetic at the pre-assessment clinic. It is a good idea to make notes at home to bring in so you don't forget any questions to ask. Some results may show up that need sorting out prior, for example heart or lung or water works problems. Your surgeon may need to postpone your surgery if it is a problem. It is a good idea to bring a member of your family

or a friend to the clinic as a lot of information is given to you on this day.

The Occupational Therapist may contact you to discuss your home environment and discharge plans. This is to ensure you have adequate social support and facilities to manage as independently and safely as possible when discharged.

A physiotherapist may also see you pre-operatively to plan the most appropriate walking aid, with the aim of trialling this prior to surgery. You will also learn the appropriate exercises so you can start practising early to manage as independently and safely as possible when discharged.

LEVEL ONE

You will be staying in the purpose built orthopaedic rooms on Level One.

Visiting hours are between 10.00a.m. and 8.00p.m. with a rest period between 1.00p.m. and 3.00p.m. each day. Please limit visitors in the first 24 hours after surgery to close family and friends for your own well being and recovery.

Friends and family may phone the ward at any time for information and calls will be put through to patients during the following hours to reduce interruptions:

10.00a.m - 12.00noon
3.00p.m.- 5.00p.m.
7.00p.m. - 8.00p.m.

Phone: 66418450 or 66418453

YOUR CHEST

If you develop a cough, cold or chest infection within the week before the operation, the Anaesthetist will delay your surgery. Please phone the Day Procedure Unit on 6641 8351 if this occurs.

SMOKING AND ALCOHOL

Smoking should cease as soon as possible, but at least two weeks before your anaesthetic. Smoking increases surgical and anaesthetic risks and impairs healing. The hospital can offer QUIT packs to help you with this. Please enquire at your pre-admission appointment.

Smoking is not permitted in the hospital or its grounds. Should patients wish to smoke they should do so outside the hospital grounds, and will be required to sign a form.

Alcohol should not be consumed for at least 24 hours before your anaesthetic. Stopping smoking and weight loss decreases chances of minor and major events going wrong and improves wound healing.

SKIN CARE

Please protect yourself from scratches, infections, sunburn etc. in the weeks leading up to the surgery, as you may not be operated on if there are any skin problems, due to the risk of infection.

Please let the Day Procedure staff know if you have any scratches or wounds prior to admission by phoning 6641 8351.

WHAT TO BRING

- Medicare card, Private Health Insurance.
- Pension, repatriation or Health Care Card.
- All relevant x-rays.
- All your regular medications in their original boxes.
- Personal toiletries, night garments, covered shoes with non-slip soles. Make sure the shoes are not tight as your feet may swell a little. Loose fitting day clothes e.g. shorts and T-shirt.
- Planned walking aid e.g. crutches.

DO NOT BRING

- Valuables and large sums of money. The hospital is not responsible for their loss.

ADMISSION

The Day Procedure Unit will phone you the working day prior to your procedure for your admission time and fasting instructions and advise you when to take the Gabapentin tablet that was given to you in the pre anaesthetic clinic.

FASTING

You will be given a fasting time when the Day Procedure Staff phone you. Fasting means nothing to eat or drink; including water, gum and lollies. You may be asked to have your usual medication prior to admission; take this with a sip of water only. Diabetics will be given instructions at the pre-admission clinic regarding your medication.

BEFORE YOUR OPERATION

The nurse at the Pre-Anaesthetic Clinic will give you three surgical sponges (pre-operative body sponge). Two nights before your surgery use a sponge, then again the night before.

DAY OF OPERATION

Shower again the day of surgery and use the third sponge following instructions. The body should be rinsed well and dried using a clean towel. Clean clothes and shoes should then be worn.

DO NOT shave, wax or clip your hair at home before admission.

DO NOT use any powder, deodorant, make-up, nail polish, perfume or jewellery.

Arrive at Admissions in the Surgical Services Unit at the time instructed. Your knee area will be shaved and prepared for surgery.

SURGERY

Your operation will last approximately 2-3 hours and you will wake up in the recovery room. You will stay there until you have adequately recovered from the anaesthetic and your pain is controlled.

POST-OPERATIVELY (Day 0)

You will have an oxygen mask or nasal prongs and an intravenous infusion (drip) in your arm to give you fluid, antibiotics, pain relievers and blood if required. A urinary catheter may be required.

There may be a surgical drain from your wound to remove any excess blood and fluid from the operation site.

A nurse will be checking you regularly for bleeding, swelling, movement, sensation and pain, as well as your vital signs.

Once your condition is stable you will be transferred to the Orthopaedic Ward –Level 1.

Good pain control is most important after your surgery. A "push through the pain" approach isn't recommended. Please speak up if you have excessive pain so that we can increase or change your medications to get you comfortable. Some pain or discomfort is inevitable but the recovery should not be excessively painful.

Your vital signs will continue to be monitored. The frequency of observation will decrease as your condition improves.

You will have a device on your legs that will gently squeeze to help prevent deep vein thrombosis (blood clot).

THE DAYS AFTER YOUR OPERATION

- If diabetic you may have adjustments made to your medications to allow strict control of your sugar levels
- If you have a drain or catheter it will be removed.
- You will have a blood test to determine if you may need a blood transfusion.
- An x-ray is done 24 hours post op if not already done in theatre, to check the alignment of the components.
- You will be assisted out of bed by the physiotherapist and the nurse the morning after your operation.
- You will become more mobile with time and practise.
- You will have medication to help you go to the toilet. Pain relief medication and decreased mobility can cause constipation. **(It is very important to keep your bowels regular).**

The physiotherapist will give instructions about the ongoing exercises for your new knee (see page 30).

Exercises are your responsibility and you can attend to most of them by yourself, as instructed by the physiotherapist. It can be a good idea to try to time the "PRN" pain relief that you can ask for as needed so that it kicks in before Physio sessions. (Do not compromise your physio because you have pain and you don't want the medication).

The longer you leave the physio the harder it is.

It is also important to regularly perform **deep breathing and foot/ankle exercises**. The nursing staff will remind you, but you should use your own initiative. These exercises will help to prevent respiratory problems in your lungs and clots in your legs. (see page 34)

Later your intravenous line (drip) will be removed if you are tolerating food and fluid and your pain can be managed with tablets.

You will be encouraged to be more independent. You will be feeling less pain and more motivated to participate in your own care.

You will be educated on administering your own Clexane injection if the Doctor wants you to have this medicine. This is used to prevent clots. You will be prescribed this on discharge for up to four weeks after the operation.

You will be progressed onto your pre-determined walking aid eg. Crutches, 4 wheeled walker or pickup frame under the guidance of your physiotherapist.

You will be ready for discharge when :

1. The wound is ok.

2. Pain is controlled by tablets.

3. Independent in/out of bed and to the toilet/shower.

4. Managing basic leg exercises.

5. Independent with your walking aid.

6. Managed stairs safely.

7. You can administer your clexane injection independently if needed.

8. Occupational therapy and physiotherapy are content with your overall progress.

9. It is safe and sensible to go home.

10. Ideally we like you to be able to bend you knee to 90 degrees and get it out straight before you go home.

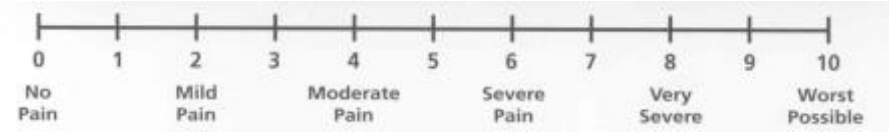
The typical stay in hospital after knee replacement surgery is getting less and less. Our first version of this book said 7 days was average but now some people are able to go home much earlier than that. Many people are ok to go home after 2 or 3 days or occasionally even 24 hrs. Don't be disappointed if you need longer! If you are keen to go home early it is important to have someone at home with you.

MANAGING YOUR PAIN & NAUSEA

MEASURING PAIN

GBH uses the Verbal Numerical Score (VNS) to measure pain. We ask you to rate your pain on a scale of 0-10. This assists us in working out what we need to give you to manage your pain.

0 represents no pain, 5 is moderate pain, and 10 represents the worst pain you have ever had or could ever imagine. Please let the staff know if your pain is not controlled. It is not possible to totally relieve pain but we aim to make you as comfortable as possible. DO NOT let your pain get out of control. We advise that you ask the nurse for pain relief if you feel that your pain is 4 or greater on the pain scale.



It is important to achieve good pain relief in order to enable you to perform your exercises effectively, to improve your ability to rest and to speed up your recovery and discharge.

PAIN CONTROL.

Pain control options include:

- **Get off to a good start.**
  It is much easier to keep pain levels comfortable if you get off to a good start. The key decision that a patient can make that makes a difference to pain levels is to choose to have the surgery done under spinal rather than general anaesthetic. Spinals are a bit safer and offer a quicker and more comfortable recovery. Some patients are worried about listening to the operation but the Anaesthetist can still make you snooze with a spinal block. Hip replacement surgery isn't nearly so sore as it used to be and one of the things that has contributed to that is increased use of spinal anaesthetics.
- **Oral medications.** For most patients especially those that had a spinal anaesthetic, pain will be able to be controlled with some tablets.These may be given with or without injections; depending on the type of pain you are experiencing. Multimodal analgesia refers to different medications given at the same time which can include injections the doctor puts in at the time of surgery. The aim of this is to target different pain "pathways" in the body to more effectively manage your pain. It is extremely important to take regular pain medication including paracetamol.
- **Patient Controlled Analgesia (PCA).** A machine, which delivers pain medication through your intravenous drip whenever you (the patient) press the control button. This allows you to have control over your own pain. Refer to PCA leaflet given to you at the pre-admission

clinic. PCAs can cause nausea and we are using them less. They are only rarely necessary now, and very very rarely necessary for patients who had a spinal anaesthetic.

- **Regional Nerve Blockade.** Prior to surgery your anaesthetist may insert a tiny threadlike tube into your leg close to your nerves. Drugs are injected into the tube to numb the area of the body that is to be operated on. These aren't used much currently in Grafton.
- **Norspan Patch** is a patch applied to your arm, that releases a slow continuous dose of pain medication, usually for 7 days. Oral medications can be used to supplement this patch. These aren't used much currently for hip replacement surgery.
- **Epidural.** This is a regional nerve block where a thin plastic tube is inserted between two vertebra into the epidural space. It is currently rarely used after joint replacement surgery in grafton. It is used as a form of anaesthetic during your operation and can be left in for up to three days to provide pain relief post operatively, allowing good pain relief for your increasing mobility.

NAUSEA

Anaesthetics and pain relieving medications can make you feel nauseated. Effective anti-nausea drugs are available and it is important that you ask for them if you are experiencing nausea.

While it is not important to eat initially, it is important to continue sipping fluids when you are feeling nauseated.

CONSTIPATION

Constipation is often a problem following surgery. This may be due to the use of pain relieving medications, limited movement and a change from your usual eating habits.

Should this be a problem for you, be sure to discuss this with your nurse or doctor. Regular medication will be given to you to combat constipation whilst you are in hospital.

If you are sent home on pain medication, be sure to ask the nurse if they cause constipation. If so, continue bowel medications for the duration of your pain medication. Various bowel medications are available over the counter or at supermarkets.

REHABILITATION

After your operation the role of the physiotherapist is to prepare you for discharge by helping you achieve independence as safely and as quickly as possible.

You will not be discharged until you are safe and independent with your selfcare, ie. walking short distances with your crutches or frame, getting in and out of bed etc.

However, you will need assistance at home with tasks such as cooking, cleaning & shopping.

You will have a review with your Surgeon at around 6 weeks after surgery. At this point you may be allowed to drive again.

Whilst you will generally be independent by 6 weeks, knee replacements continue to regain strength and movement beyond 12 months. So be prepared to continue to work on improving your outcomes over this extended time frame.

PHYSIOTHERAPY EXERCISES

You will initially be taught how to use crutches and the exercises to do immediately after surgery.

The exercises will help prepare your ligaments and muscles for the new joint, as well as improve mobility and strength after surgery.

Successful patients often report this is one of the most important aspects which can improve your surgery's result.

You will be asked to attend the Knee Clinic at the Physiotherapy Department at 11:30am on the first Thursday after your discharge from hospital.

At this time a physiotherapist will assess your range of movement, strength and function and advise you on progressing your rehabilitation. You will continue to attend the knee clinic periodically to continue assessing and progressing your rehabilitation.

Our aim is to progress your program towards the best possible walking style you can achieve, i.e. no limping!
If you are using a walking aid, try to remember your instructions at all times.
It is much better to walk slowly in the correct pattern, than to rush along, limping! (see the following crutches guide)

INSTRUCTIONS FOR USE OF CRUTCHES

1. ADJUSTING THE CRUTCHES

- The height of the crutches should be adjusted so there is a 3-finger gap between the top of the crutch and the armpit (adjust using lower two bolts)
- The position of the handle is adjusted to a level where the elbow is slightly bent.

2. USING THE CRUTCHES

- Check that all fittings are tight and rubber stoppers are not worn.
- The weight of the body is taken through the hands, not the armpits.

Technique:

Put the crutches slightly in front of you; support your body weight by **pushing through your hands,** and step with the operated leg **between** the crutches. Then step through with the good leg. Do not jump.

Never press the crutches into your armpit as this can damage the nerves and blood vessels that supply your arm and hand. Take as much weight as you can comfortably. Try to walk with a normal gait, landing on your heel and rolling onto your toes. The physiotherapist will have taught you this in the pre admission clinic.

Stairs/Steps: One step at a time

UP: The good leg goes first, followed by the operated leg and the crutches.

DOWN:
The crutches go first, with the operated leg. Make sure you are supported well on the crutches **before** stepping down with the good leg.

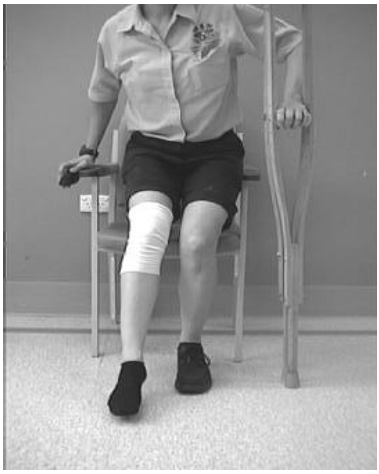
Sitting:

Getting into and out of a chair:

- Hold both the crutches with one hand on the hand grips. The other hand is placed on the arm of the chair or bed.

- To stand put your weight through your good leg and your arms.

- To sit, with one hand find the armrest, put your weight through your good leg and your arms and control the movement- don't plonk.



Conditions Of Use:

- Regularly check and tighten the screws on the crutches.

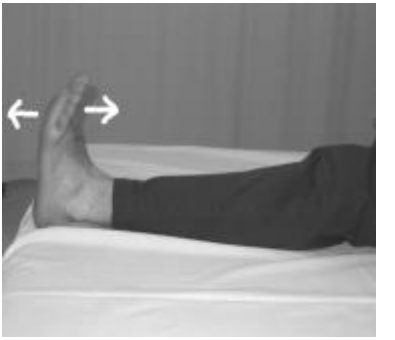
- The user accepts responsibility for checking the crutches periodically for signs of wear, and returning any faulty equipment to your place of purchase.

- The time spent using your walking aid will be determined by the type of surgery (eg un/cemented) and your progress in terms of strength and flexibility. Your Surgeon and Physiotherapist will monitor this.

EXERCISES

These can be done in bed **before** getting up to walk.

1. Ankle exercises,



Lying down:

- move toes/foot up and down
- slowly rotate foot /ankle in a circle, clockwise and anti clockwise.

2. Buttock exercises,

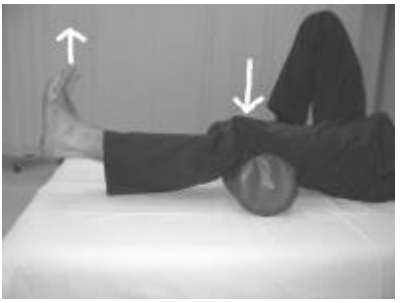
Lying down squeeze buttock muscles together.
Hold for 5 seconds, relax for 5 seconds.

3(a) Knee straightening/extension stretch

With a small roll under the ankle, tighten the thigh muscle and press the knee down. Hold for ten seconds. You should feel a stretch at the back of the knee.

(b) Inner Range Quads

With your knee bent over a roll, pull your toes back first, push your knee into the roll as you lift the foot up and down.



4. Straight Leg Raises (SLR)

Pull your toes back, stiffen knee, slowly lift your leg off the bed, and then slowly lower back down. Relax all muscles between repetitions.

5. Knee bending

Lying down –

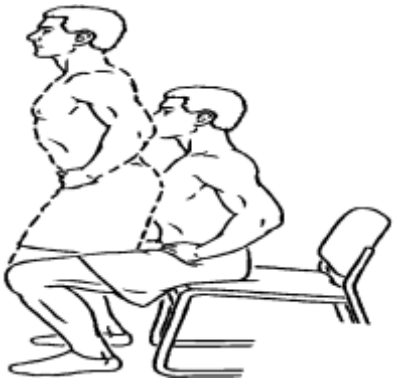
(a) Slowly slide heel towards your buttocks and back again.

(b) Sitting – slide foot back under chair as far as possible. Hold this stretch for a count of ten.

(c) Standing straight whilst holding on to something secure, pull toes up and bring heel towards bottom.

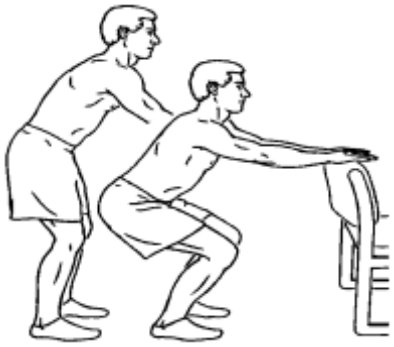
6. Sit-to-stand.

Sit on edge of chair, feet flat on floor. Stand upright, squeezing buttocks muscles and extending knees fully. Repeat x 10 in-a-row.



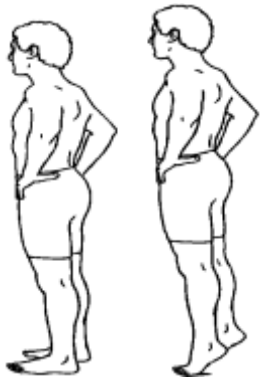
7. Squats

Keeping feet flat on floor, shoulder width apart, squat as low as is comfortable. Squeeze buttocks muscles as you stand back up. Use support as necessary. Repeat x 10.



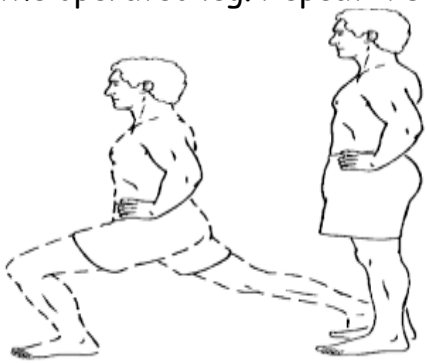
8. Heel Raise.

Rise on balls of feet. Repeat x 10 in-a-row.



9. Lunges.

Standing with feet shoulder width apart and keeping stomach tight take a small - moderate step forward with the operated leg. Repeat x 8 in-a-row.



Your Physiotherapist may prescribe further exercises for you for the long-term maintenance and development of your knee, as you are getting ready for discharge. These will be tailor made for you depending on your individual needs. It is important that you attend the knee clinic at the physiotherapy department after your discharge from hospital.

10. Deep breathing and coughing exercises.

After surgery it is most important to do deep breathing and, coughing exercises to prevent congestion and collapse of your lungs.

The Active Cycle of Breathing Technique.

This technique should be practised at home prior to surgery. It is a proven way of improving your lung function, and will hasten your lungs to recover from the anaesthetic.

1. Take a deep, slow breath in, hold it for 3 seconds, then quietly breathe out through your mouth. **Repeat** another 3-4 times.
2. Continue normal relaxed breathing for 1 minute.
3. Repeat step 1, taking 4-5 deep slow breaths.
4. Take a medium sized breath in and do a huff, by opening your mouth wide and forcing the air out quickly. **Repeat 3 times.** To do a huff, imagine that you are holding a mirror in your hand, and you want to fog it up.
5. Continue normal breathing for 1 minute.

Repeat this cycle until huff becomes dry.

Do this cycle at least once every hour you are awake.

GUIDE TO ACTIVITIES OF DAILY LIVING
OCCUPATIONAL THERAPY

You will meet your Occupational Therapist (OT) at the pre-admission clinic. The Occupational Therapist is a trained professional in rehabilitation who will work with you to ensure that you will be able to return to your daily routine as independently and safely as possible.

The OT will assess how the Total Knee Replacement surgery will affect the activities that you perform daily, for example: sitting down, getting dressed, taking a shower and using transport.

The OT will also discuss your home, work and recreational activities. If required the OT will visit you in your home to determine any equipment, modifications to your home or services that may be necessary on your discharge from hospital.

Modifications may include the installation of grab rails adjacent to the toilet or shower, or a handrail by your front steps. Equipment such as over toilet aids, bath boards, shower stools, long handled aids etc may be purchased or lent to you by the hospital.

Aides for Activities of Daily Living

DAILY ACTIVITIES

The OT will ensure that you will be able to perform normal daily activities safely, prior to leaving the hospital. Any difficulties that you may be experiencing will be discussed and advice and help will be given.

Sitting down

Each chair that you sit in should be at an appropriate height and have arm support as low chairs may be difficult to get out of. (Remember not to cross your legs.)

Going to the toilet

Most toilet seats are too low. To raise the height of your toilet and to give you support to raise yourself off the toilet, the OT can supply you with an over toilet aid.

If required, the installation of a grab rail near the toilet may be considered for long term use.

Taking a shower

Following your knee replacement it is recommended that you sit down for a shower. The OT will determine the appropriate equipment for you, depending on your needs.

Commonly used equipment includes bath boards and shower chairs of varying designs. To save picking up soap, keep your soap in a stocking with one end tied to the taps or use a "soap-on-a-rope".

Aids such as a long handled sponge, toe washer/dryer, shoehorn, stocking/sock gutter are most useful as they increase your ability to reach your feet and the floor without having to bend over.

DO NOT use taps or soap holders for support in the shower.

Sit whilst dressing.

- Dress your operated leg first and undress it last.
- Wear loose, comfortable clothing.
- Do not wear thongs or loose slippers.
- Wear compression stockings as recommended by your Doctor.

LOANING EQUIPMENT

Your Occupational Therapist would have advised you that all equipment is loaned for a period of two months. If you need to loan any equipment for longer than two months, contact your OT.

RETURNING EQUIPMENT

When returning equipment to the hospital, please take it to the OT Department located in the Annex Building at the rear of the hospital grounds.

DOMESTIC ACTIVITIES

In general when doing things in your home, such as cooking and cleaning, avoid the following:

- excessive bending when weight-bearing, eg. climbing stairs
- lifting or pushing heavy objects
- low surfaces, eg, chairs, toilets, baths
- putting on excessive weight
- activities that involve stop-start movements, twisting and impact stresses
- kneeling
- resume activities slowly and give your body time to recover.

Handy hints:

- plan to do a small number of tasks each day, rather than all in one day! Take frequent rests!
- where possible sit down to do activities
- store commonly used items such as personal hygiene items, kitchen foods and appliances at an easily accessible level (table top height)
- plan to do activities at waist height, eg. use a laundry trolley or an ironing board
- use resources at home, eg. electrical equipment and family members

Driving

It is the doctor's recommendation that you do not drive for 6 weeks following your Total Knee Replacement operation. This applies to both automatic and manual cars.

The RTA states that you need a medical clearance if you wish to drive prior to this 6 week time frame.

Getting in and out of the car as a passenger

- always sit in the front seat with the seat pushed back as far as possible.
- back up to car door with walking aid until you can feel the door frame touch the back of your legs.
- lower yourself onto seat, holding onto car handy-bar, if available.
- shuffle your bottom back toward the driver's seat.
- swing your legs into the car slowly (may require assistance).
- buckle up and you are on your way.
- complete this process in reverse to get out of the car.

<u>NOTE</u>: CAR TRAVEL SHOULD BE MINIMAL FOR THE FIRST 6 WEEKS POST OP.

Catching a bus

- Get into the bus one step at a time, good leg first.
- Get off the bus one step at a time, operated leg first.
- If you get confused, try to remember "*the good leg goes to heaven", the bad (operated) leg goes to hell*"
- Ask the driver to wait until you are seated. Choose an aisle seat with your operated leg on the aisle side.
- Make use of the handles on the top of the chairs for support.
- Always use your walking stick in the hand opposite to that of the operated leg.

Travel

- Avoid sitting for long periods to prevent the affected leg from swelling. Wear your compression stockings if you have to fly anywhere.
- You should also continue to do your ankle exercises.

Sleeping

You may need to raise the height of your bed. Blocks may be placed under the legs of the bed or an extra mattress added. The top of the mattress should be level with, or above your knee when you stand beside the bed. If you are unsure of the height, the OT can arrange a home visit for assessment.

It is important that you make sure that you have adequate room around the bed to manoeuvre yourself and any walking aid.

Sexual activity

You and your partner may resume sexual intercourse when the sutures have been removed and the wound has completely healed. Avoid any position that causes pain.

RECREATIONAL ACTIVITIES

We all have different ways of spending our leisure time. Discussed below are some specific activities, which may or may not apply to you.

Gardening

- Do a little at a time
- Use long handled implements
- Avoid digging
- Care must be taken - sit on a stool rather than kneel or squat

Swimming

- Excellent sport. Observe safety precautions when entering or leaving pool.
- Safe in early convalescence (after wound healed!)
- **AVOID ROUGH OCEAN WATERS!**

Bowls

- **Check with your doctor**, usually safe after 8-12 weeks post surgery.
- Best with delivery on the same side as your new knee
- Enquire at your bowling club for a "bowls lifter". If available, most useful for picking up ball without bending too far.

Golf

- Good activity at 3 months also, **check with your surgeon.**
- Avoid excessive twisting or bending.

Tennis

- After 3 months, **check with your surgeon**.
- Grass courts more suitable. Social doubles best.

Cycling

- Safe after 3 months, **check with your surgeon.**
- Ensure seat and handlebars are adjusted to a high position.

Fishing, easy walking and gentle dancing are all great.
Other low impact sports may be possible approximately 12 weeks post-op.
Running or similar high impact activities are not recommended ever.

FOR OTHER SPORTS AND ACTIVITIES CONSULT YOUR SURGEON.

Returning to work
As described earlier, your knee prosthesis does not have an unlimited life span and the amount of physical stress placed on the joint will affect the durability of your new knee. Any work that involves a lot of sudden, jarring stresses or ongoing heavy weight load on the joint would not be recommended.

Examples of unsuitable occupations would include labouring work that involves heavy lifting or digging.

However, each individual's work role involves a variety of tasks and your surgeon or OT will discuss your options with you. It may be possible to modify the tasks of your current work to reduce the stresses on your knee or selecting an alternate, more appropriate occupation.

GOING HOME

As you are achieving the discharge criteria (**see page 18**) you can start planning your discharge day with the hospital staff.

At the time of discharge from hospital, your stitches/staples may still be in your knee. We will arrange for you to see a Community Nurse or your Surgeon 10-14 days after the surgery.

You will need to see your GP for ongoing pain medications and possibly to recommence any medications that we have stopped for your surgery.

The knee area may continue to be warm and swollen for a number of weeks after surgery, with some slight discomfort. This is normal. Remember that you have had a major surgical procedure and the soft tissues around the knee take some time to heal.

Your surgeon/physio will advise when you are able to walk without a walking aid. Until then continue to use your walking aid. (Usually for 6 weeks.). You will gradually improve in strength and confidence to be able to walk independently.

It is important to maintain your exercise program, to ensure your leg muscles stay strong and your knee movement is maximised.

Make sure your checklist on **page 46** is completed.

Slowly increase your level of activity. This will occur over several months, so do not try too hard too soon.

The majority of people experience good to excellent results following Knee Replacement with significant relief of pain and return to good functional movement and strength, enabling them to walk, sit, drive a car and cope with the activities of daily life more easily.

Call your Surgeon if you have increased pain, excessive swelling and excessive warmth or redness, drainage from your wound, chest pain, shortness of breath, a worsening limp, or any other symptom you do not fully understand.

LONG TERM MANAGEMENT

GENERAL ADVICE

AVOID THE FOLLOWING:

- Any activities involving stop-start, twisting or impact stresses
- Excessive bending
- Lifting or pushing heavy objects
- Low surfaces, chairs, toilets, baths
- Putting on excessive weight. Keep in mind that extra weight means additional stress on your knee.

HOME MODIFICATIONS

If required, minor modifications can be arranged through the Clarence Valley Home Modification Service (CVHMS). The CVHMS provides a subsidised service for pensioners.

Work can be undertaken for non-pensioners but at full cost. Examples of modifications include the installation of hand hold shower hoses, grab rails, hand rails and step ramps. The CVHMS can be contacted on 6643 1831.

COMMUNITY SUPPORT SERVICES

If you need assistance at home on discharge from hospital you may be referred to a community support service such as TACs (for people over 70 years being discharged from hospital), Homecare, Feroscare or COMPACS (for people any age being discharged from hospital).

INFECTION ALERT

Should you develop an infection of the knee replacement (ooze from wound, increased pain, localised swelling, redness or heat around the wound), you must have a wound swab and blood test done such as ESR, FBC and CRP BEFORE any antibiotic therapy is started. Your GP shouldn't start any antibiotic without letting your surgeon know.

It is also important to attend to any cuts or abrasions especially on the leg with the knee replacement.

If you develop any other forms of infection (eg. infected sores, a urinary tract infection, fevers) at any time after your knee replacement, or if you have surgery for any reason (including endoscopic procedures, dental extractions or gum work), contact your GP without delay to discuss the possibility of receiving preventative antibiotics.

Any delay may cause serious problems or jeopardise the success of your new knee!

NOTE: This is a lifetime consideration

DISCHARGE CHECK LIST

(To be completed prior to discharge)

MEDICATIONS

Have medications	yes	no
Requires script	yes	no
Own meds. Returned	yes	no
Own scan/xrays returned	yes	no
Clexane kit	yes	no
Community Services referral	yes	no
Medical Certificate	yes	no

SPECIALIST FOLLOW UP APPOINTMENT IN FRACTURE CLINIC GBH

Patient to make own appoint.	yes	no

……/……/201…….

X-RAY APPOINTMENT WHEN REQUIRED

Referral form given	yes	no
Patient to make own appoint	yes	no
Home assessment conducted	yes	no
Equipment loaned	yes	no

PHYSIOTHERAPY APPOINTMENT WHEN REQUIRED

Referral made by staff	yes	no
Patient to make own appointment	yes	no

COMMUNITY TRANSPORT (if needed)

Certificate of Safety to Travel	yes	no
Time arranged	……. am/pm	

APPOINTMENTS:

Pre op Clinic Date: ……..

Surgery Date: ……..

Follow up dates:

X-ray	Time am/pm	Date / /
Specialist Surgeon	Time am/pm	Date / /
GP	Time am/pm	Date / /
Community Nurse	Time am/pm	Date / /
Physiotherapist	Time am/pm	Date / /
OTHER		
……	Time am/pm	Date / /

……	Time am/pm	Date / /

FLEXION BEND

30 ° 40 ° 50 ° 60 ° 70 ° 80 ° 90 ° 100 ° 110 ° 120 °

Day 1								
Day 2								
Day 3								
Day 4								
Day 5								
Day 6								
Day 7								

QUESTIONS FOR THE DOCTOR OR THE PRE ANAESTHETIC CLINIC

This booklet was adapted from the Lismore Base Hospital Knee Replacement Handout.

We hope this booklet has been of help to you. Consult it regularly and discuss any questions with your Surgeon/GP/ Physiotherapist/Occupational Therapist/Nurse and friends prior to the surgery. Information is power. Anxiety comes from the unknown, so find out as many answers to your questions beforehand to reduce this extra stress. If you have any other queries before, during or after the surgery please contact the

Day Procedure Unit	6641 8351
Level 1	6641 8450
Occupational Therapy Department	6641 8738
Physiotherapy Department	6641 8770

GRAFTON BASE HOSPITAL
REVIEWED 07/15