

Knee Replacement Surgery

Getting ready for your surgery and recovering afterwards



Dr Sam Martin

The Specialist Orthopaedic Centre



We acknowledge the Traditional Custodians – the Bundjalung, Yaegl, Gumbaynggir and Githabul Nations of the lands and waters where we work and live. We pay our respects to the Ancestors and Elders of these Nations, and to all Aboriginal people past, present and emerging.

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Developed by physiotherapists, doctors and nurses.



The Health Literacy reader-friendly tick of approval.

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Phone 02 6641 8770

Address: Grafton Base Hospital, Arthur Street Grafton

Getting healthy for your surgery

You will have better outcomes from your surgery and an easier recovery if you are as healthy as possible. Some health conditions can also mean that your surgery is delayed or cancelled.

There are things you can do to improve your health while you wait for surgery.

Exercise

- Maintaining or improving your general fitness in the lead up to surgery will improve the speed of your recovery after surgery
- Specific exercises that target strengthening and maintaining the movement at your knee joint can also improve your pain, reduce stiffness in the lead up to surgery, as well as speed up your recovery after surgery.
- Exercising in the presence of knee arthritis is both **safe** and **helpful** to manage your symptoms while you wait for surgery.
- Occasionally people choose to delay or cancel their surgery because exercising the arthritic joint has resulted in a significant improvement in their symptoms.



Contact your local Knee and Hip Arthritis Service (KAHAS) 02 6641 8770 or a Physiotherapist to help get you started with exercise.

Alcohol

Do not drink alcohol for at least 24 hours before your anaesthetic.

Alcohol stops your body healing well and can increase your resistance to anaesthetic. Having more than 2 drinks a day, or more than 4 at one time can put you at risk.



Speak to your GP for ideas to help reduce your alcohol intake.

Getting healthy for your surgery

Eating well

- Being overweight or underweight can increase the risks of problems during your surgery. It's a good idea to discuss weight management with your care team.
- Eat mostly healthy foods and limit unhealthy foods. Try to eat meals that are full of fruits, vegetables, whole grains, lean meats or fish, tofu or beans and low fat dairy.
- Amino acid supplements may also be recommended to aid your recovery. Please ask us if you would like to know more.
- Drink plenty of water and avoid soft drinks that contain sugar.



Contact **Get Healthy** on 1300 806 258 for free health coaching.

Heart Health

It may be helpful to have a review of your heart health with a specialist prior to your surgery. If you have a previous heart condition or if you have a pacemaker you will need to have had a review with your Specialist in the last 12 months.



See your general Practitioner (GP)

Your GP can help you get ready for surgery. If you have a chronic health condition your GP can help you manage it in the lead up to your surgery.



Smoking

It's a good idea to try and quit smoking before your surgery if you can. Smoking puts strain on your heart and increases your chance of blood clots. It also makes it harder for you to breathe and increases your risk of infection. If you stop smoking you will recover faster from surgery.

Contacts to help quit smoking

Quitline www.quit.org.au or 13 78 48

Helping U 2 Quit Clinic 07 5506 7010

You can also contact your GP for help to quit smoking.



Getting healthy for your surgery

Help at home

- If you live alone or are a carer for someone, or if your knee is stopping you from being able to care for yourself or your loved ones, there may be help available to you both before and after your surgery.
- If you think you might need home help after your surgery, try to arrange it as soon as possible while you wait for surgery. This can help get you home safely earlier after surgery and put some of your worries at ease.



Contacts for help at home

- **My Aged Care** for people 65+ or 50+ for Aboriginal and Torres Strait Island people
1800 806 258 or <http://www.myagedcare.gov.au/getting-started>

Occupational Therapy

- Occupational Therapists (OTs) help people improve their ability to perform tasks in their home or workplace. They can recommend a range of equipment to help you be as independent and safe as possible.
- Equipment can often make daily tasks easier by conserving energy, limiting painful movement, supporting transfers and maintaining independence. Here are some examples of the most common equipment that can help before and after surgery:
 - Shower Chair or Stool
 - Bath Board or Transfer Bench
 - Over Toilet Aid or Raised Toilet Seat
 - Long Handled Aids: help you to reach your feet, back and objects on the ground without bending over.

Please ask us if you would like help contacting an occupational therapist or sourcing any aids.

Prehab (Physiotherapy) before your surgery

- There are a number of benefits to maintaining or improving your strength and fitness in the lead up to surgery.
- This can assist to speed up your recovery after surgery and help you prepare both physically and mentally for your upcoming surgery.
- A Physiotherapist can assist you to find a suitable amount and type of exercise to suit your needs.
- A Physiotherapist will interview you and look at all aspects of your health – not just your joint.
- You, and those close to you, will be given information on how to improve your health as you prepare for surgery.
- There are a number of public and private Physiotherapy providers in the Clarence Valley that we can help to connect you with.

Our Physiotherapist Amanda at the Specialist Orthopaedic Centre can be contacted for any Physiotherapy questions about Prehab or your upcoming surgery on 02 6675 0737 or 0402 624 526.

The Knee and Hip Arthritis Service is located at Grafton Base Physiotherapy Department and Maclean Community Health.

You can contact the Knee and Hip Arthritis Service on 02 6641 8770.



Anaesthesia for Total Knee Replacement

Preop Consultation:

- Dr Martin and his anaesthetic team are very good at preparing patients for surgery, such that for most patients, they do not need to have a formal consult with the anaesthetist. Dr Martin may send you for further tests and specialist appointments leading up to your surgery in order to best prepare you for your joint replacement. This is usually after discussion with his anaesthetist. The anaesthetist will phone you prior to your surgery and do a thorough phone consult. Please make sure you write down any questions you may have about the anaesthetic a week prior to your date of surgery.

Types of Anaesthetic:

- Your anaesthetist will discuss the anaesthetic plan with you ahead of time. The plan is tailored to you and will depend on your medical history, your general health, risk factors you may have, and also any preferences you may have.
- In order to get you back on your feet as soon as possible, most patients are given a combination of a low dose spinal anaesthetic as well as a nerve block and are also given a light general anaesthetic. Some patients may not be able to have a spinal anaesthetic due to medical reasons, but rest assured you will be able to have alternative pain control and still be back on your feet as soon as possible.

Spinal Anaesthetic:

- A spinal involves an injection of local anaesthetic drug into the fluid surrounding your spinal nerves. This is done with you sitting on the edge of the bed hugging a pillow, with your lower back arched out. The anaesthetist will numb a small area of the lower back where the spinal needle will go so that the procedure is not uncomfortable.
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- This is done in the anaesthetic bay prior to going off to sleep for safety reasons. The aim is to inject local anaesthetic into the fluid and avoid injecting into a nerve. You need to be awake enough to let the anaesthetist know of any signs of this during the procedure – this may include ‘electric shock’ sensations down the legs – much like when you hit your funny bone. If this occurs, the anaesthetist will readjust the needle so that the injection remains safe.
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- Once the spinal injection is done, you will be numb from the waist down. This reduces the amount of pain killers you need during the operation, and thus their side effects. The dose used in the spinal will mean that it will wear off by the time you leave the recovery room so that you can get back on your feet as soon as possible.
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- You don't have to be awake for the surgery if you are having a spinal anaesthetic. Most people are well enough to have both a general anaesthetic and spinal anaesthetic.

Anaesthesia for Total Knee Replacement

Complications of spinal anaesthetic

- Your anaesthetist and their team take every step to prevent them. Complications of a spinal are rare, but can still occur.
- This includes but is not limited to :
 - Bleeding - A haematoma may form near the spinal cord and can cause spinal nerve damage and paralysis. This is very rare. To minimise this risk, if you are on blood thinners then your anaesthetist will give you instructions as to when to stop taking them prior to surgery. Depending on the type of blood thinner you are on and your medical history, this may be a reason why your anaesthetist may not offer a spinal anaesthetic for you.
 - Infection at the site of puncture and the region surrounding the spinal cord. The procedure is done in a sterile fashion to minimise this.
 - Allergic reactions to local anaesthetic. Very rare

Nerve Block:

- A nerve block involves injecting local anaesthetic close to nerves that supply the joint and surrounding tissues. For knee replacements, an adductor canal block is done to numb the knee joint specifically. This is done under ultrasound guidance for safety. The nerve block aids in minimising the amount of pain killers you require after the procedure. It provides for longer pain relief than the spinal anaesthetic. It can be done after the spinal anaesthetic when you are already numb, or when you are asleep if you are not having a spinal anaesthetic.

Indwelling urinary catheter:

- A urinary catheter is useful to empty your bladder during the procedure. The catheter will usually be removed when you leave the recovery room.

Fasting times before the surgery:

- This is for your safety. You need to have stopped eating any solid food or milk products for at least 6 hours before any type of anaesthetic, to avoid aspirating any stomach contents when you are asleep. (If aspiration occurs, this can be life threatening).
- You can have the Dex drinks and water until 90 min before your admission time. Please ask if you have any questions about the exact timing.

Regular medications or other changes:

- Your anaesthetist will provide you with preop instructions about your medications. It is important to let them know your most up to date medication list. Important medications of note include but are not limited to – blood pressure medications, blood thinners, diabetes medications, over the counter herbal supplements.

Risks of Surgery

Total Knee Replacement

These risks will be discussed as part of the informed consent process. Please read through them and ask Dr Martin if you have any questions.

- There is an approximately 1 in 100 risk of infection, which can be early at the time of the surgery or years after the surgery through blood stream infection.
- There is a risk of early failure. In most situations this is between 2-4 % in the first few years.
- Early or late failure can be due to infection, fracture, loosening, wear or other causes. This can still happen if you take every care to look after your new joint.
- If the knee fails, it is usually possible to do it again, but that is usually a bigger operation. The risks of a redo are usually greater and the results usually aren't as good as a first time replacement that goes well.
- About 1/5 patients has some degree of ongoing pain. Very occasionally that can be severe.
- Some limitation of function is common. For example, some people can't comfortably kneel or squat after knee replacement.
- The knee can set too stiff, or it can be too wobbly that you don't trust it.
- There can be post operative deformity like knock knees or bow legs.
- The operated leg can be lengthened.
- The knee replacement can clunk or swell.
- A numb patch next to cut is routine.
- A serious nerve, blood vessel or tendon injury permanently affecting the use of your leg is possible. The risk is about 1/300.
- A severe blood vessel injury or infection can result in amputation. The risk is about 1/5000.
- There is a risk of other serious problems with the surgery including heart attack, blood clots on the legs or lungs, kidney or bowel problems, stroke and death.

Getting ready for your knee replacement surgery

Before surgery checklist

- Confirm the date of your surgery.
Surgery date:
- Make physio appointment for 1 week after your surgery
Physio appointment date and time:
- Make GP appointment for 7-10 days after your surgery
GP appointment date and time
- Start your skin preparation 3 days before your surgery
- Start your Movicol 3 days before your surgery if you have been advised to do so.
- Speak to the hospital the day before your surgery and find out:
Time to stop eating:
Time to stop drinking:
Time to arrive at the hospital:
- Drink two Dex drinks on the morning of your operation at least 90 minutes before your admission time.
Finish your last drink before this time:

Getting ready for your knee replacement surgery

Two weeks before surgery:

- See your Physiotherapist:
 - Ask about pre-op (before surgery) exercises if you don't already have any. Discuss any other equipment you may need after the surgery.
 - Arrange an appointment for 1 week after your surgery.
- Work on any exercises you have been prescribed to get your muscles in good shape. This will help your recovery after the surgery.
- Contact your GP to arrange an appointment for 7 - 10 days after your surgery. This is in case you have any medication requirements or other issues after the surgery.
- Book your post op (after surgery) appointment with Dr Martin. Usually 2 weeks after surgery is a good time. If you live further away, 4 to 6 weeks after the surgery is also reasonable.
- Take care of your skin. Don't do things that have a high risk of scratches, like gardening, mowing or playing with frisky puppies.

Please notify the Baringa Hospital Day Surgery Unit on 6659 4444 or Dr Martin:

- **if you have scratched yourself and have any cuts, scratches or infections on the leg to be operated on.**
- **if you become unwell or have any other new health issues in the 2 weeks leading up to your surgery.**
- **if you are taking strong pain killers without your GP knowing. This will affect your recovery after surgery**

**Canadian Crutches
(also known as forearm
crutches)**



Getting ready for your knee replacement surgery

One week before surgery:

- Read your post op (after surgery) instructions well and ask any questions.
- Read your medication directions. Check that you are clear about any medication you will have to take and how to take it.
- Read through the recovery from total knee replacement surgery information. Please ask any questions that remain unanswered.
- Continue your exercise program.
- If you have a thermoactive knee brace, practice putting it on so you know how to use it.
- Commence staph clearance treatment if advised (see over).

Please notify the Day Surgery Unit (6659 4444) or Dr Martin:

- **if you have scratched yourself and have any cuts, scratches or infections on the leg to be operated on.**
- **if you become unwell or have any other new health issues in the 2 weeks leading up to your surgery.**
- **if you are taking strong pain killers without your GP knowing. This will affect your recovery after surgery**

A **Thermoactive knee brace** is a brace designed to relieve knee pain. It provides gentle pressure on the knee, and can have an ice pack or heat pack inserted. It has a hand pump that you can use to inflate the brace so you can control the amount of pressure on your knee.

You can buy a Thermoactive Knee brace from the Specialist Orthopaedic Centre if you wish. It is not required but can help ease your recovery.

A cooling blanket or other device may also be useful.



Getting ready for your knee replacement surgery

Screening

- We screen our patients for staph aureus (golden staph) prior to elective joint replacement. There is a rare superbug version and a common type. Golden staph lives on the skin or in the nose of up to 1 in 4 healthy people. If even the common type enters the body through a surgical incision or cut it may cause a bad infection. If your result comes back positive, we will advise clearance therapy to reduce the risk. This will include the use of a nasal ointment and a body wash starting 7 days preop.
- All patients will also be given an antibacterial wash to use prior to surgery.
- We also test your urine prior to surgery to ensure you have no current infections which could pose a risk for a post operative infection.

Three days before surgery:

Skin preparation

You have been given three sponges. For the two days before surgery use 1 sponge in the shower each day. Use the last sponge on the morning of the operation. This will reduce your chance of infection.

How to use the sponge

- Wet your whole body and hair thoroughly
- Wash with the sponge paying special attention to the knee area that will be operated on. Also wash feet and toenails on the leg being operated on. Avoid contact with eyes, ears mouth and body cavities.
- Rinse your body thoroughly
- Wash your whole body again with the sponge, paying attention to your hair and genital areas.
- Rinse your body thoroughly
- Dry yourself with a clean towel

If you get a rash or itch stop using the sponge and wash the soap off completely. Don't shave any areas on the leg being operated on. It will be carefully clipped on the day of surgery.

Movicol

You may be given three sachets of Movicol. It is a gentle stool (poo) softener to protect against constipation after the surgery. It isn't heavy handed and is well worth taking to prevent trouble later. Take one each day for 3 days before the surgery (not the day of surgery).

Getting ready for your knee replacement surgery

One day before surgery

- Contact the hospital after 8am the day before your surgery and they will let you know:
 - what time to arrive
 - what time you need to fast from (stop eating and drinking).
- If your surgery is on a Monday then you should contact them on the Friday before.
- Please call the Day Surgery Unit on 02 6659 4444 if you don't hear from them by 2 pm on the day before your operation (or Friday for Monday surgery).
- What to pack for hospital:
 - Bring the information folder with you.
 - Pack your Thermoactive knee brace if you have one. Remember to be proactive about using it after your surgery.
 - Bring your puffer or insulin (as advised by your anaesthetist)
 - Walking aids, hearing aids and reading glasses
 - Loose comfortable clothes and pyjamas
 - Toothbrush and toiletries in case you stay overnight.

Day of Surgery

If your surgery is in the morning:

- Stop eating at midnight. Drink the 1st Dex drink when you wake up. Drink the 2nd Dex 90 minutes before your admission time. You can drink both at the same time. You are also encouraged to drink up to 600mL of water of water up until 90 mins before your admission.

If your surgery is in the afternoon:

- Stop eating at 7am. Drink the 1st Dex at 11am. Have the 2nd Dex drink 90 minutes before your admission time (you can have both at the same time). You are also encouraged to drink up to 600m of water up until 90 minutes before your admission.

Follow the advice of your anaesthetist if it differs from this protocol.

In the lead up to your surgery you will receive an email or text message with a link to a survey. You will receive the same link a number of times in the weeks and months after your surgery as well. Please complete the survey each time. This helps us to keep track of your health and surgery outcomes.

Recovery after your knee replacement surgery

Things that are normal:

- It is quite normal for your knee to be warm for weeks or months after a knee replacement.
- It is also common for a knee replacement to give some clicking or clunking feelings.
- Swelling for weeks or months is normal too.
- A numb patch on the outside of the cut is also normal.
- Some bruising up or down your leg is reasonably common. This happens if some blood tracks under the skin to cause a bruise. This is painful when it happens.
- It is also common for patients to experience a tough week or a period where they go backwards for a little while. As long as things get better again, that's ok. Night pain can be an issue for a period after the surgery.
- People who have had 2 knees done often find a difference between the recovery in each knee.

Alerts and things to watch out for:

- Excess pain, or trouble with movement can be a sign something is wrong. Severe pain can be a sign of an emergency and is a reason to go to hospital.
- Signs of infection like fever, pain, redness or fluid/pus leaking from the cut shouldn't be ignored. If you are worried you have an infected knee replacement it is best to see an Orthopaedic Surgeon or emergency department rather than your GP. Antibiotic tablets by themselves will not be enough to treat an infected knee replacement.
- Significant leg or foot swelling can be a sign of a dangerous blood clot.
- Difficulty breathing or chest pain can be a sign of a clot on the lungs which is an emergency.



These issues, or any other concerns would be a reason to contact Dr Martin, attend a local emergency department, seek other urgent medical assessment or call an Ambulance if unwell. Contact numbers are on page 4.

Recovery after your knee replacement surgery

When you wake up from your surgery

- You will wake up in the Recovery Unit , but may not remember this.
- An X-ray is taken to confirm everything looks ok.
- Nurses will carefully check that you have recovered from the anaesthetic well. If a urinary catheter was placed, it is usually removed when you leave recovery. The IV tubes attached to you can be removed too.
- When all this is done, you will be taken back to the surgical ward. When you arrive there, it will be time to eat and drink something to get your energy up. Try to drink 2 or 3 cups of water.
- Your legs will have stockings on them to prevent bloods clots and your feet may have some foot pumps too. A foot pump is a Velcro shoe device that squeezes your feet to encourage blood flow and prevent blood clots.
- Your leg will be bandaged and there will be a little anaesthetic infusion device attached near your knee which looks like a ball.
- Your leg will be a bright pink colour from the preparation for surgery.
- After eating and drinking, get dressed in your own clothes. These should be loose and comfortable. Ask the Nurses for help with this if necessary.

Getting up to walk

- When the feeling in your feet is back to normal and you don't feel dizzy, you can get up to walk.
- The first time you get up, make sure a nurse or a Physiotherapist is there to supervise.
- At first when you walk, you will use a frame, crutches or a stick for balance, whichever aid works best for you. You will be allowed to put your full weight through your leg.
- You are also encouraged to get your leg moving from the beginning.
- There are some exercises on **pages 38 to 43** of this book. These focus on getting your leg straight and bending it. If you can get your leg out straight and bend it to 90 degrees or more, you may not need to do the exercises many times – you are doing well already! Your physiotherapist will guide you in how to do the exercises and how often to do them.

Recovery after your knee replacement surgery

On the day of your surgery

How will my knee feel?

- It is normal to have very minimal or no pain for the first 24 hours or so after knee replacement. It is still important to rest, ice and elevate your knee, so it doesn't swell and get sore later.
- If you do have some pain, there are things we can do to get on top of it. Just ask your nurse or doctor.
- If you have a thermoactive knee brace, you should use it frequently even at this early stage.
- You can also use ice or an ice pack. Wrap it in a clean towel. Never apply frozen material directly to your skin.

Apply the ice or thermoactive knee brace to your knee a **maximum of 20 minutes at a time, every 2 hours.**

There is no need to ice your knee any more often, or for longer than this.

Going home from the hospital

- You may be able to go home on the day of surgery if:
 - You have recovered well
 - You have good general health
 - You have someone at home to look after you
- The brown elastic bandage **must be removed if:**
 - It digs in
 - You have excess pain
 - Your ankle doesn't move normally

If you are at home and experiencing excess pain, contact Dr Martin or seek urgent medical assessment. You can visit the Emergency Department or call your GP and ask for an urgent appointment. Check the alerts on **page 14** for things to watch out for.

Recovery after your knee replacement surgery

Day 1 after surgery

How will my knee feel?

- As per the day of surgery, it is common to have very minimal or no pain for the first 24 hours after your knee replacement. Don't be disappointed if you have some pain, there are things we can do to get on top of it. It's important not to overdo it if you have no or minimal pain, and it is still important to rest, ice and elevate your knee so it doesn't get very swollen and sore later. If you have one, the thermoactive knee brace should be used frequently. Ice or a cooling blanket are also useful.
- If you have recovered well, have good general health and someone at home to look after you, you may be able to go home.
- You will be on some medications when you go home. You will be on a blood thinning medication to reduce the risk of blood clots such as aspirin or Rivaroxoban. You will have medication to help manage your pain (see page 23 for more detail about pain medication).

Post Op Monitoring

Starting the day after the surgery you will receive a link via sms or email (whichever is more convenient for you). This will happen daily for the first 5 days post surgery then second daily until 2 weeks after your surgery.

The link will be to a very short survey that will monitor your progress and notify Dr Martin about any problems that you are having with your recovery.

Getting your knee moving

- There are some exercises on **pages 38 to 43** of this book. These focus on getting your leg straight and bending it. If you can get your leg out straight and bend it to 90 degrees or more, you may not need to do the exercises many times. Your physiotherapist will guide you in how to do the exercises and how often to do them.

Recovery after your knee replacement surgery

Days 2-3 after surgery

It's very common for the knee to get a bit sorer and feel heavier 2-3 days after your surgery. It will normally get easier again from here, so don't be disheartened if you feel you've gone a bit backwards after the first day.

- This is normally the hardest time. Your leg may feel heavy and more swollen. Sometimes people's thigh muscles temporarily shut down or "go to sleep" after knee replacement surgery. If that happens, they are usually the most "sleepy" around 48 hours after the surgery. Pain is also often felt more around this time - but it does get less again! People's energy levels or emotions are often lowest around this time. Don't be disappointed if you feel like you have gone backward or are feeling a bit low 2 days after the surgery, both of these things are common.
- The elastic bandage and the anaesthetic infusion are usually removed 48–72 hours after surgery.
- You will need to keep your wound dry. To do this in the shower, you can wrap your knee in plastic wrap or use a plastic bag and surgical tape.
- Keep working at your rehab as instructed by your physiotherapist. It's important to take enough pain killers and to control swelling in your knee at this time too. Rest, ice, elevation and compression all play a role. Use the thermoactive knee brace if you have one.
- If you went home within the first 24 hours after your surgery, you may have an appointment with one of Dr Martin's team at 2 to 3 days post op. This is for a check up and to remove the pain buster.

Days 4-7 after surgery

- Things should be getting easier again. It is still important to keep on top of pain and swelling. By now you may have started to get a feel for what activities or exercises work for you. If your knee comes out straight, you can walk reasonably well, and you can bend it to 90 degrees or more then you are doing fine.

Your knee shouldn't leak any fluid after day 7. Please notify Dr Martin or seek medical attention if it does.

Recovery after your knee replacement surgery

7-14 days after surgery:

- This is a good time to have an appointment with your physiotherapist. If possible, organise this before the surgery, in case appointments are hard to come by.
- This is also often a good time to catch up with your GP, in case there are any medication or other issues that need addressing. Book this appointment in advance, before your surgery.

2 weeks after surgery:

- Some patients will have an appointment with Dr Martin now. This appointment will normally involve a wound check and discussion about the rehabilitation progress so far. You may also discuss things like return to work and driving.
- After 14 days the dressing can be removed and the wound can get wet. If you haven't seen Dr Martin, you may remove the dressings yourself after 14 days.
- There are no stitches or staples to remove as they will dissolve by themselves. There is a sticky, slightly rubbery strip beneath the main dressing. If possible, keep this on a bit longer than 2 weeks. It can tear the wound a little if removed early.
- The prescription for your blood thinner medication will normally run for 15 - 30 days after you go home from hospital. Keep taking the medication for this time. Continue to use the compression stockings for 2 weeks following your surgery.

The first 14 days: If you are at home and your pain is not well controlled, please discuss this at your check up, or contact Dr Martin for advice.

Also check the alerts on page 14 of this book.

2 to 6 weeks after surgery:

- This is a time to continue making progress with rehabilitation under the supervision of your Physiotherapist. You can gradually return to more strenuous activities as they are comfortable. Many people will start to feel better than before the surgery by 6 weeks. At 6 weeks after surgery, many people are also able to undertake the same activities as they could do before the surgery. Some people get better faster and some people recover more slowly. It is totally normal not to feel 100% by 6 or 8 weeks post-surgery.

Recovery after surgery

Pain relief medications

Pain Management

Putting up with strong pain will hold your rehab back. Please let Dr Martin know if your pain isn't well controlled. These pain killers can play a part in your recovery. Swelling management is also important. Rest, ice, elevation and compression all play a part.

- It is important to have a good pain management schedule. Below is a summary table. There is more detail about these medications on the following pages.
- Pain killers can cause constipation. It is a good idea to continue Movicol and/or Coloxyl and Senna until things are back to normal. Make sure you drink plenty of water and eat enough fibre.

Pain medication	When to use	When to stop
Paracetamol/Panadol Osteo	Take regularly as per instructions on the packet	This is the last pain reliever you should stop.
Non-Steroidal anti-inflammatory drugs (E.g Celebrex)	If you know you can take them safely, take them regularly as per instructions on the packet	Aim to stop them after 1 week.
Pantoprazole	Please take these when you are taking the non-steroidal anti-inflammatories regularly. This is to prevent any stomach upset.	Can stop this when you stop the non-steroidal anti-inflammatory drugs.
Palexia	Strong pain killer – Take regularly as prescribed	Can be stopped early if you don't need them. It is reasonable to take them for a few weeks if needed.
Endone	Strong pain killer – Take as breakthrough if the regular Palexia is not enough	

Recovery after surgery

Pain relief medications

Pain Management

Following surgery or an injury it is normal to have pain. Each person's experience of pain can be different but it is expected to last between a few days and a few weeks.

In most people this pain can be well controlled. It is important for your recovery that you manage your pain well so that you are able to do rehabilitation activities. You may have a pain management plan to help you know what pain relieving medication to take, when, and for how long.

This section is designed to help you manage this pain at home with either medication you have from your local pharmacy or medication from the hospital. Your doctor may want you to take a combination of these medications to help keep your pain under control.

You may have been recommended one or more of pain relieving medications to take at home. They may be prescribed alone or in combination to control your pain.

My pain relief medications are:

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Recovery after surgery

Pain relief medications

Medications For Mild to Moderate Pain

Paracetamol

Paracetamol 500mg tablets (Brands include: Panadol, Panamax, Dymadon or Febridol)
or

Paracetamol 665 mg modified release tablets (Brands include Osteomol[®], Panadol Osteo[®])

The usual adult dose of Paracetamol is one or two 500mg tablets, FOUR times a day, **or** one or two 665 mg tablets THREE times daily. This may have been prescribed to be taken regularly. Taking the full recommended dose may help keep constant pain under control. Paracetamol is often important for people with stronger pain to help other medications work better, or to require less of the stronger medications.

If you take the recommended dose, the risk of side effects with this medication is very low.

If you have liver disease you should consult with your doctor before taking paracetamol.

To avoid overdose DO NOT EXCEED a total of 4 grams of paracetamol in 24 hours.

This is 8 tablets of 500mg or 6 tablets of 665mg.



Note that Paracetamol is also in some combination products (with codeine such as Panadeine[®] or Panadeine Forte/Codalign Forte[®]) or Maxigesic[®] or Cold and Flu tablets. Always check the label for paracetamol.

Recovery after surgery

Pain relief medications

Medications For Mild to Moderate Pain

Anti-inflammatory Medication

This group of drugs include non-steroidal anti-inflammatory drugs (NSAIDs) and COX-2 inhibitors.

Drug Name (generic)	Common Brand Names
Ibuprofen	Brufen, Nurofen Maxigesic
Naproxen	Naprosyn, Naprogesic
Diclofenac	Voltaren
Indomethacin	Indocid
Piroxicam	Feldene
Meloxicam	Mobic
Celecoxib	Celebrex

These medications are used to control pain due to inflammation and swelling. Anti-inflammatories are used to treat mild to moderate pain. They can be combined with other pain medications to relieve severe pain.

Side effects are more common than with paracetamol. Common side effects include heartburn, stomach upset, dizziness, diarrhoea and headache.

To minimise these effects they must be taken with food.

If you experience side effects such as blackened stools, blood in vomit, skin rash, difficulty breathing or swollen ankles, contact your doctor immediately.



Anti-inflammatories have the potential to interact with other drugs e.g. warfarin, blood thinners and some blood pressure medication. Check with your doctor or pharmacist if you take any of these.

Before taking this medication it is important to let your doctor or pharmacist know if you:

- Have had a stomach ulcer or bleeding
- Have had asthma
- Have had kidney problems
- Have a history of heart failure
- Have had a previous allergy to any NSAIDs
- Are taking any other medication

Recovery after surgery

Pain relief medications

Medication for moderate to severe pain

Opioids

Oxycodone, Tapentadol, Codeine, Morphine, (Brands include: Targin, Oxycontin, MS Contin, Endone, Palexia)

Opioids are only to be used for moderate to severe pain and are often prescribed for temporary use after surgery. There are different types of opioids that you may be prescribed. They are available in tablets, capsules, patches and injections. They will often be used in addition to paracetamol and sometimes also anti-inflammatory medication, but should not be taken instead of these if they have been prescribed for you.

They are available in slow release formulations which are usually taken at regular time intervals and instant release formulations taken for 'break through pain'. Often a pain management plan on discharge will involve gradually reducing the dose of these.

Common side effects include nausea, vomiting, itchiness, confusion, headache and dizziness. Drowsiness can occur with opioids and may mean that you need your dose reviewed. If affected do not drive a motor vehicle or operate machinery. Let your doctor know if you become excessively drowsy. Alcohol should also be avoided when taking opioids.

How long should I continue the pain relievers?

Once your pain starts to subside, you may reduce the amount of pain medication you take until you no longer need the medication. Normally, you should start by reducing the opioids first, followed by anti-inflammatory medication and then paracetamol. However this may depend on your pain management plan.

If your pain gets worse when you are at home, or your pain relief medication is no longer controlling your pain, please contact your local GP or Dr Martin. If it is very severe, or you are worried something is wrong, seek emergency attention at a hospital (Emergency Department).

Recovery after surgery

Pain relief medications

Pain Management: ON-Q* Pain relief System

Do not squeeze the pump. It has the force necessary to deliver your medication.

- Your surgeon has placed a catheter near the site of your surgery with an elastomeric pain pump. This is to help control pain in the first few days after your surgery. The following is a brief overview of the instructions you will get when you leave hospital.
- Your pain pump does not contain any narcotics, so you should not feel any side effects such as dizziness, sleepiness, nausea or vomiting.
- The pain pump contains an anaesthetic which is a 'numbing agent'. It will numb only around the site where it is attached.
- The pain pump will provide you with pain relief for about 2-3 days. The outcome and benefits of using this pain pump may vary from patient to patient with the type of surgery that was done. These benefits may include decreased pain, decreased narcotic consumption and quicker return of movement.
- The infusion only targets a specific area around your surgical site. It is important that you also take your pain pills as prescribed by your anaesthetist or surgeon if required.



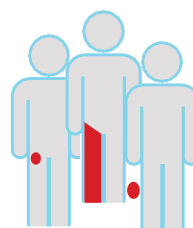
Narcotics

The brain and entire body are affected



Local Anesthetics

Only the area near the surgical site is targeted



Recovery after surgery

Pain relief medications



IMPORTANT INFORMATION:

Things to be aware of when using the ON-Q* Pain Relief System

WARNING: The following symptoms may represent a serious medical condition. Immediately close the clamp on the pump tubing and call your doctor or 000 in case of an emergency to prevent serious patient harm.

- Increase in pain
- Fevers, chills or sweats
- Bowel or bladder changes
- Difficulty breathing
- Redness, warmth, discharge or excessive bleeding from catheter site
- Dizziness or lightheadedness
- Blurred vision
- Ringing or buzzing in your ears
- Metal taste in your mouth
- Numbness and/or tingling around your mouth, fingers or toes
- Drowsiness
- Confusion
- Seizures

Numbness

Be aware that you may experience loss of feeling at or around the surgical area. If numbness occurs, take proper measures to avoid injury. Be careful when placing hot or cold items on a numb area.

Caution:

- Do not reuse the pump
- Protect the pump and catheter site from water according to your doctor's instructions

Recovery after surgery

Pain relief medications

ON-Q* Pump – Frequently Asked Questions

Will the ON-Q* Pump system treat all of my pain?

- Patients experience different levels of pain.
- The ON-Q* system works with other medication and therapies your surgeon may prescribe to manage your pain after surgery. With the ON-Q* system, you may need less strong pain medications and have better pain relief than with medications alone.

How do I know the pump is working?

- The pump delivers your medication very slowly. It may take longer than 24 hours after your procedure to notice a change in the size and look of the pump.
- As the medication is delivered, the pump (ball) will gradually become smaller.
- You should also take any other pain medication as instructed by your surgeon.

How long will my ON-Q* pump last?

- Depending on the size of your pump, it may take 2-5 days to give all the medication.
- All the medication has been delivered when the ON-Q* pump is no longer full. The outside bag will be flat and a hard tube can be felt in the centre of the pump.

Removal of your ON-Q* Catheter (tube)

If you go home with your ON-Q* Pump in place, your surgeon will arrange for it to be removed at The Orthopaedic Centre 2-3 days after your operation.

Frequently asked questions: Is knee replacement surgery for me?

How do I know if my knee is bad enough for a knee replacement?

- Firstly an x-ray or scan is necessary to confirm bone-on-bone arthritis in your worn-out knee. A knee replacement is not an option to consider without bone-on-bone wear.
- After that it is important to realise that not everyone with a worn-out knee needs a knee replacement. There are sensible alternatives that you should try first. After this, if you are still having a bad time with miserable knee pain, then we would consider surgery.
- It is major surgery. It is not something you should undertake for a niggle, or so that you can do something very demanding that isn't reasonable for your age group. It is, however, a very good operation for someone that is having significant trouble with day to day things due to knee arthritis.

What is arthritis?

- Osteoarthritis (OA) is when a joint wears down or fails so that it is rubbing bare bone-on-bone. Many people use the term 'arthritis' to dismiss vague aches and pains that they resign themselves to put up with. However, osteoarthritis is specific and usually treatable. It can cause pain, stiffness, bony lumps, bow or knock kneed legs and swelling. Hip and knee replacements are examples of major operations for osteoarthritis.
- Surgery for osteoarthritis is generally the last resort. There are many non-surgical treatments that can also be discussed with the doctor. Other types of arthritis, like rheumatoid or psoriatic arthritis, are often treated by a rheumatologist. An orthopaedic surgical opinion may be useful in these cases too if there is a lot of damage to the joints.

What is osteoporosis?

- Osteoporosis is a condition often associated with ageing, in which bones become weaker and break more easily. It is known to be associated with other medical conditions or medications. If you are concerned, ask your GP.
- If you are middle-aged or older and have broken a bone, it is also something to have checked. There are tests to rule out important causes and there are effective treatments, too. If someone has osteoporosis, it doesn't mean they can't have a knee replacement.

Frequently asked questions

Is knee replacement surgery for me?

What are my options apart from surgery to manage my arthritis?

Exercise and physical activity is recommended for everyone with arthritis. The aim of exercise is to increase the strength of the muscles around the joints, maintain joint movement, and increase your fitness. Exercise is safe to do for people with arthritis. Starting exercise is not always easy, so start slowly and gradually build up. A physiotherapist can assist in providing a tailored exercise program for you.

Being overweight can contribute to the pain you have in your joints. Healthy eating and physical activity are ways to lose weight. Maintaining or achieving your ideal weight reduces the stress on your joints.

Simple pain relief medication can help you keep moving. Your GP can provide advice on this. Heat and ice can also help manage your symptoms.

These options may help you reduce joint pain, improve your ability do things at home and work, and benefit your general health and well-being.

Do injections work for arthritis?

- There are different types of injections available. Any injection has a small risk of infection.
- Cortisone injections can give temporary pain relief. In general, these would be used to help pinpoint which pain was from where, rather than for on-going treatment. There are some lubrication-type injections, however these are expensive and the research to support them is inconclusive. In practice they are a bit “hit and miss”.
- Other injections include platelet-rich plasma or stems cells. These treatments are not yet at the point where they are useful in terms of making cartilage grow back. It is possible that stem cells may be useful in the future, but realistically that is a long way off. There are a lot of things wrong in a worn-out knee that would need fixing for cartilage cells to take.

What about a keyhole surgical clean out?

- Keyhole knee surgery is called arthroscopy. Keyhole surgery used to be done quite a lot for arthritis but research has shown that it isn't reliable. Some people feel better after it and some people are worse. Because of this, arthroscopic surgery for arthritis isn't usually recommended anymore.

Frequently asked questions about knee replacement surgery

What is a knee replacement?

- A knee replacement is a resurfacing type of operation. A cut is made off to the side of the front of your knee. The kneecap and muscle are slid out of the way. The worn-out bits of bone are cut off to a depth of about 1 centimetre. Metal caps are then placed on the end of the thigh bone and top of the shin bone with a plastic cushion in between. The back of the kneecap is often replaced with plastic, keeping your normal front part of the kneecap. The components fit in amongst your own ligaments on the sides of the knee. They are usually fixed with special bone cement.
- Computer navigation is used to align the components accurately. Dr Martin aims to align the components to recreate the shape of your own knee before it wore out. This allows your ligaments to work as well as possible, which helps your new knee to work better.
- A typical, first time knee replacement does not involve any extensive stems inside the bones. Those have a role to play in redo or more complicated surgery after bone or ligament damage.
- The wound is closed with dissolving stitches and dressings are applied. A little anaesthetic infusion pump for pain is used and an elastic bandage is carefully applied.

How long does the operation take?

- A knee replacement usually takes around 90 minutes. Having both sides done at once takes 3 to 4 hours. A patient will often be gone from the ward for 4 hours or more surrounding their operation, so tell your family not to worry if you are having joint replacement surgery and it seems to be taking a long time.

What sort of anaesthetic can I have?

- Most times the operation can be done under either general or spinal anaesthetic, but there can be situations where the anaesthetist would choose a specific anaesthetic for safety. A combination can also be very good.
- Many people are anxious about having to hear the surgery with a spinal anaesthetic. Be reassured that this isn't a problem, because the anaesthetist can easily make you doze with a spinal on board. If, for medical reasons, it isn't possible to do the operation under spinal then a general is fine.

Frequently asked questions about knee replacement surgery

How much pain will there be after the surgery?

- The pain associated with major knee surgery isn't nearly as bad as it used to be. This is due to a combination of improvements in technique and pain relief. Many people now have no pain or only very minimal pain during the first 24 hours. It is great to be active, but don't over do it in that period.
- Occasionally someone will have significant pain after the operation, but we have many options to try to reduce your pain. Please ask your nurse or doctor if you feel your pain relief is not enough.
- The second or third day after the surgery is usually the hardest. This is when your leg will feel the heaviest and it can be when feelings of pain are a bit stronger. Don't be too disappointed if you have a period where you feel you have gone backward a bit. This is a very normal part of the recovery.
- Night pain can be an issue for a period after the operation. There are options to help with night pain too.

How long would I stay in hospital? Is Day Surgery for me?

- Patients are discharged when they are safe and comfortable to go home. With current techniques, this can be on the day of surgery.
- A day stay total knee replacement is an option for people who:
 - don't have any complicated health problems that would need in-hospital care after surgery
 - have someone at home with them for the first few nights
 - haven't had any falls or faints in the last five years
 - didn't require any walking aids like sticks or a walker before the surgery
 - have recovered well and are safely walking comfortably after surgery

Frequently asked questions about knee replacement surgery

How long will the knee replacement last?

- The results of knee replacements are very good, and you can expect your joint replacement to last a long time. This does depend a bit on your age, activity level and the underlying condition that required joint replacement surgery.
- For most people the knee replacement would last more than 15 years, and it may last as long as 20 or 25 years or more. There is, however, a small risk of failure at any time after knee replacement surgery for various reasons. There is even about a 1 in 100 chance of failure within the first year.
- Dr Martin takes certain steps to improve the chances of your joint replacement lasting a long time, including:
 - choosing a prosthesis based on The Australian National Joint Replacement Registry results
 - using computer navigation and careful technique during the surgery.

Can it be done again?

- In most cases it is possible to re-do a failed knee replacement. In most cases it is even possible to re-do it more than once. This is called a revision. Usually it is a bigger operation with higher risks and worse results than a successful first (called primary) knee replacement. Very occasionally it may not be possible to re-do the failed joint but that really is unusual.

Frequently asked questions about knee replacement surgery

What can go wrong after knee replacement?

- We take a number of steps and great care to avoid the risk of serious problems after a knee replacement.
- Serious problems after a knee replacement are very unusual and Dr Martin and his team take every step to prevent them. Despite these steps, problems can still occur. For example, infection can cause early failure or on-going pain. A late infection, years after the surgery, is also possible but very unusual. The overall risk of failure due to infection is less than 1%. Failure can also occur due to wear, loosening, breakage of the bones about the knee or for other reasons.
- Some degree of minor permanent pain is reasonably common after knee replacement, but on-going severe pain is very unusual. Occasionally the knee might set very stiffly or, conversely, it can be too wobbly. A large part of the surgery is getting this balance right.
- Sometimes the leg might end up overly bow legged or knock kneed, but this is also unusual with modern techniques. It is possible, but very rare, to have a serious nerve, tendon, ligament or blood vessel injury during the surgery. That can cause a permanent problem. In the very worst case scenario this can result in amputation. The risk of that is between 1 in 1000 and 1 in 5000.
- Other risks of the surgery include problems like heart attack, stroke or blood clots. Kidney and bowel problems are also possible. It is possible to die from a knee replacement. It is important to talk through the risks and benefits of the procedure and any specific concerns you have when making decisions about the surgery.

Frequently asked questions about knee replacement surgery

Are blood clots a worry?

- There are different types of blood clots you can get after a knee replacement but there are good steps that can be taken to protect against them.
- A clot in the wound is called a haematoma. This can't spread to the lungs so it isn't dangerous in that way, but it is an infection risk. Very occasionally a knee replacement might need a haematoma cleaned out in the operating theatre. With current techniques the risk of a bad wound haematoma is very low.
- The other sorts of blood clots are ones in the leg veins (Deep Vein Thrombosis or DVT) that can travel to the lungs (Pulmonary Embolism or PE). A PE can be life threatening, but there are a lot of effective measures that the team of people caring for knee replacement patients always take to minimise the risk. **If you do get short of breath or chest pain during your recovery you should seek urgent medical attention.** Significant leg swelling is also a reason to see a Doctor in a timely fashion.
- Bruising-type colours up and down the leg after surgery are not clots. They are usually from some blood that has leaked out of the surgical area.

Is infection a worry?

- Infection can be a major problem, so we take a number of effective steps and great care to minimise the risk of infection spreading to a knee replacement. Before the operation we screen and treat people for staph if needed. About a third of people in the community carry staph on their skin and special treatment to clear it before surgery decreases the risk of infection. With this, and other steps the risk of infection is less than 1%.
- It is possible for infection to spread to a new knee many years after surgery, usually via the bloodstream. This is very unusual but it is still worth taking steps to protect against. To prevent this you can:
 - check with your Doctor if you need antibiotics before other operations or procedures in the future.
 - be aware if you are getting a recurrent infection somewhere, such as a kidney infection from a stone. It is very important to treat the infection and fix the underlying issue to minimise the risk of spread to your knee.

Frequently asked questions about knee replacement surgery

Will I need a blood transfusion?

- Blood transfusions after knee replacements are very rare these days. However, it is important to tell your doctor if you have a bleeding problem. It is also important to discuss all your medications as some of these have a blood thinning effect. This includes over-the-counter medications and alternative treatments.
- You may have heard of pre-operative self-to-self blood donation. This is when blood is taken from you before your surgery so that you can be given your own blood if needed during or after your surgery. For knee replacement this is not offered anymore, as blood transfusions are so rare.

How long will it take until I am better? How long do I need off work?

- The recovery from major joint replacement surgery is much faster than it used to be, but it is different for everyone and even different from knee to knee for people who have had both done. Some people reach the point where they are back doing what was normal for them before the surgery, as early as 2 weeks after the surgery.
- For some people it takes 4 to 6 weeks until they are better than before the operation. For office type work it would be reasonable to allow at least 4 weeks off from work. If your work is more physical, it would be reasonable to allow 6 weeks or more.
- It is important not to be disappointed if your knee is getting better more slowly than average! Occasionally, people can experience a slower recovery. About 1 in 50 patients might take as long as 3 or even 6 months until they are pleased with the new knee. From then on the knee would continue to get slowly better until the new knee is fully “bedded in” which can take as long as a year.

How long until I can drive?

- Driving too early is dangerous for you and other people too. Patients who can walk well without any assistance, and aren't affected by strong pain killers are usually safe to drive. It would usually be reasonable to allow four weeks. Please discuss your plan regarding driving with Dr Martin.

Frequently asked questions about knee replacement surgery

How much physio will I need after the operation? What about rehabilitation?

- The recovery after knee replacement surgery is generally much easier than it used to be and Dr Martin is continually fine-tuning his practice to make it as easy as can be. You will be allowed to put your full weight through your leg from the start and are encouraged to get it moving from the beginning. Crutches, a stick, or a walking frame will be used initially for balance.
- For many people intense physiotherapy is no longer necessary after the joint replacement. This is especially the case for people who have done a physiotherapy course prior to the surgery.
- Often, it is now simply a matter of doing some post-operative exercises, as advised by a physiotherapist, and getting on with life. Some patients will require specific attention to some aspect of their recovery, and this is something that is dealt with on a case by case basis.
- Rehabilitation in hospital is very rarely needed after a knee replacement these days. It is much better to go home and get on with life.

How active can I be after the operation?

- The main aim of knee replacement surgery is to reduce your knee pain and improve quality of life. Being more active in the lead up to and after knee replacement can have really important health benefits.
- Activities such as long walks, bike riding, swimming, golf or doubles tennis would be examples of reasonable levels of activities for most people after joint replacement surgery.
- The effect of high impact sports or activities such as running and jogging on knee replacements is not well known. If you are keen to do high impact activities after the surgery it is important to talk it over with Dr Martin. While it is generally recommended to avoid high impact activities there are some people who may be able to successfully return to this level of activity after joint replacement. There is no good long term evidence about the effects of high impact activities on how long your knee replacement will last.

Frequently asked questions about knee replacement surgery

What is it like to have an artificial knee?

- It is very important to have a realistic idea of what to expect from a knee replacement. For example 1 in 5 people will have some minor ongoing pain for good after knee replacement surgery. This should be minor and manageable with simple pain relief. Severe on-going pain is very, very unusual or there wouldn't be any point in doing the surgery. Numb patches around the cut are very common. These usually become less noticeable with time, but some permanent numbness often persists.
- Some feelings of clunking or swelling are reasonably common and usually settle with time. Some people cannot comfortably kneel or squat after knee replacement surgery, but this is reported less and less as techniques improve. It is normal for the knee to be swollen and warm for some months after the surgery. Some degree of swelling or change in shape of the knee can be permanent. An artificial knee isn't a super knee. It isn't as good as the healthy knee of a young person, but it is normally much better than a painful worn-out one.

Will I trigger an alarm at the airport?

- This depends on what sort of metal you have implanted and how sensitive the scanner is. People ask if they should carry a card or certificate for the joint replacement. However there is no official document and this could easily be forged. Airport security staff are used to processing people who have had joint replacement surgery.

Knee Exercises after Surgery

The main goal of exercises after surgery is to improve the movement in your knee, as well as the strength in your thigh muscles (the quadriceps) so you can get back to doing all your usual activities and prevent the knee getting stiff.

If your knee already works well, there is little benefit in repeating the exercises multiple times.

Quadriceps exercises

Rest your knee over a rolled towel, then straighten your leg so that your heel lifts off the bed. Hold for 5 seconds, then slowly lower your foot. Repeat 10-20 times



Straight leg raise

Tighten your thigh muscle and keeping your leg straight lift your leg 10cm off the bed and hold for 3 seconds. Repeat 10 times.



Straight knee stretch

Place rolled towel under your ankle and place a bag of rice on top of your operated knee. Relax in this position for 5 minutes. Repeat 3 times per day.



Knee Exercises after Surgery

Knee flexion when sitting

Sit in a chair where you can comfortably reach the floor. Bend your knee by sliding your heel along the ground as far as you can. Once there, bring your bottom forward on the chair as far as you can. You should feel a strong stretch. Hold for 5 – 10 seconds, move bottom back slightly to ease the stretch. Repeat another 5 times going further each time.



Other Exercise

- It is ok to take your full weight and start walking straight after the operation. As a general guide, you should build up your walking gradually over the first few weeks.
- Some people find exercising in water useful after knee replacement. This shouldn't start until your wound has healed. A stationary bike or pedals can also be helpful after knee replacement.
- Chat to your Physiotherapist about the right type and amount of exercise for you.

Managing Swelling

It is important to try and lessen the swelling around your knee. After exercising your knee is a good time.

- Lie down with your leg elevated, but knee straight.
- Place ice into a plastic bag wrapped in two layers of towelling. Apply for 20 mins every two hours or as needed. Other cooling devices can also be useful.
- Remove ice early if it becomes painful.
- It is important to keep your operated leg elevated either on a stool when sitting, or with pillows under your calf in lying if swelling is a problem.
- Use Tubigrip (compression bandage) – when needed.

Knee Exercise Progressions

The following are a list of **advanced** exercises to improve your range of movement, strength and mobility following your surgery. If you have any questions about these exercises, please ask your physiotherapist

Only do these once your physiotherapist has given you the go ahead. Please only perform the exercises with a tick in the box next to them.

Standing knee bends

Stand and hold onto the back of a chair or the edge of a counter.
Bend the operated knee up towards your buttock as far as you can.
Hold for __ seconds.
Repeat __ times
__ times per day.



Standing knee extension

Stand and hold onto the back of a chair or the edge of a counter.
Tighten muscle on top of thigh by pushing operated knee backwards, so it is as straight as possible. Push heel into floor to help.
Hold for __ seconds.
Repeat __ times.
__ times per day.

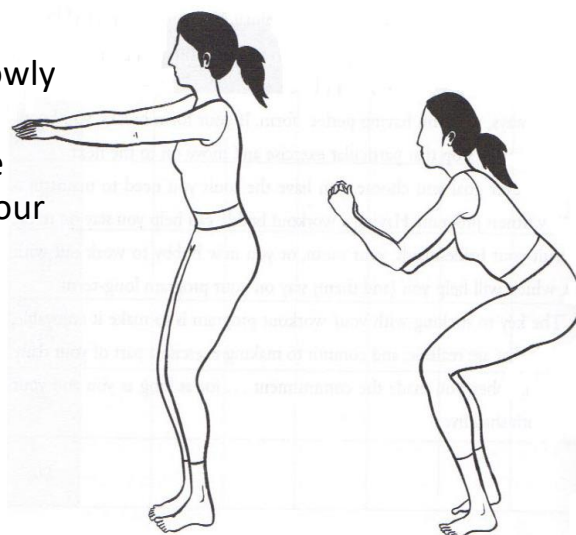


Knee Exercise Progressions

Squats

With your hand holding onto a bench, slowly bend your knees. You need to keep your thigh muscles tight and your knees in line with your toes. It is also important that your weight is evenly distributed.

Repeat ___ times.
___ times per day.



Step ups

Stand in front of a small step (or stairs) and hold onto a support. Place both feet shoulder width apart with toes facing forwards. Step up onto the step with ___ leg first making sure the knee and toes point forwards.

Then step down with ___ leg.

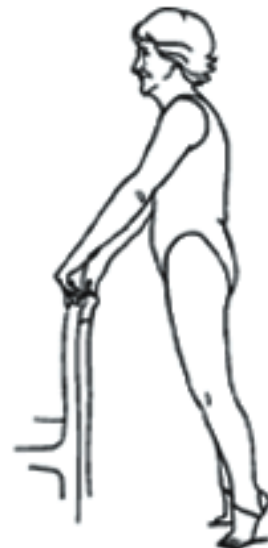
Repeat ___ times.



Knee Exercise Progressions

Heel raises

Stand holding onto support.
Lift your heels off the ground as far as you can go.
Do this exercise slowly.
Repeat __ times
__ times per day



Calf stretch

Stand with your operated leg out behind and your other leg forward, with both feet facing forwards. Shift your weight over your front leg with your knee bent, and push the heel of back foot into the floor. You should feel a stretch in your calf muscle.
Hold __ seconds.
Repeat __ times.



Everyone's recovery following knee replacement is unique. Some people will require very little Physiotherapy or follow up. Other people may benefit from a short period of supervised gym based exercise or hydrotherapy. Your Physiotherapist will discuss these options with you.

Notes



A series of horizontal dotted lines for writing notes.



The Specialist Orthopaedic Centre

