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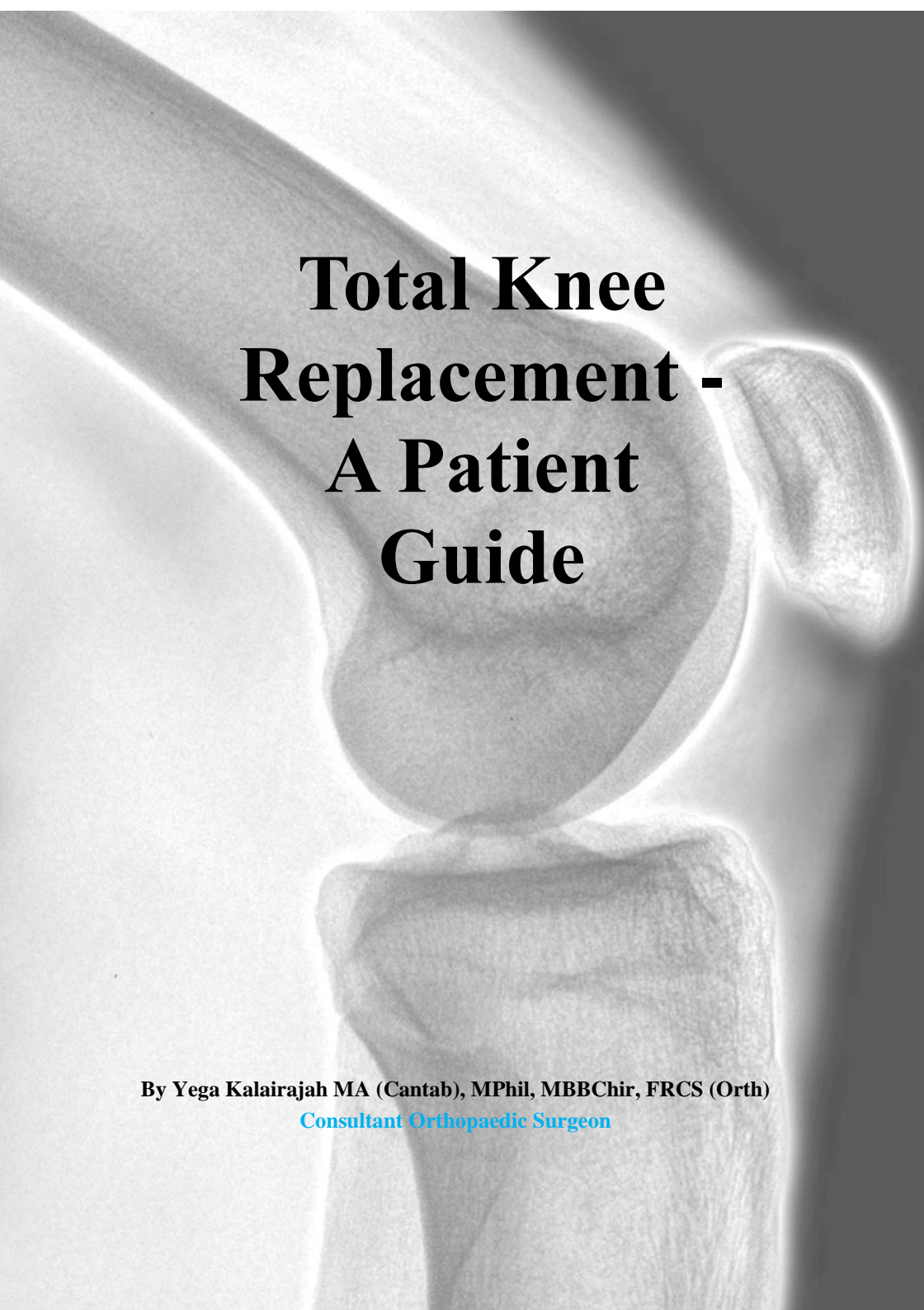
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Total Knee Replacement - A Patient Guide

By Yega Kalairajah MA (Cantab), MPhil, MBBChir, FRCS (Orth)
Consultant Orthopaedic Surgeon

The Profile of your Surgeon



Yega Kalairajah graduated from Cambridge University and Guy's and St. Thomas' Hospital in London in 1995. He carried out his basic surgical training in South East London (King's College

Hospital) and subsequently went on to do his Orthopaedic training in the South West London Region (St. George's Hospital). After completing his FRCS (Tr & Orth), Yega spent a year of advanced training in Sportmed.SA, Adelaide, Australia in Sports Surgery, Arthroscopy (keyhole surgery) and Arthroplasty (joint replacement) surgery.

On completing his Certificate of Completion of Specialist Training (CCST), Yega took up a locum consultant position at Epsom and St. Helier's Hospital NHS Trust and the South West London Elective Orthopaedic Centre (EOC). EOC is the largest arthroplasty unit in Europe enabling Yega to be one of the highest volume hip and knee surgeons in the UK during his 18 month tenure at the unit. In Oct 2007, Yega was appointed as Consultant Orthopaedic Surgeon at the Luton and Dunstable University Hospital

(L&D) with the aim of forming the hip and knee unit within the trust. The L&D now provides all cutting edge treatments available for hip and knee disorders to the region and further afield. He still maintains an Honorary Consultant status at the EOC unit. To date he has carried out well over a 1000 hip and knee replacement operations as a consultant and all his operative data is submitted to the National Joint Registry. This ensures effective monitoring of personal outcomes to ensure the highest quality service.¹

Yega has a committed interest in teaching and research and plays an active role in helping and supervising research and education at his base NHS trust. He is an examiner for the UCL medical students, is the Orthopaedic Tutor for trainees at the L&D and presents and teaches at national and international courses and meeting regularly. Yega has also completed a Master's degree in Engineering on hip acetabulum (socket) fixation techniques. He has published extensively in Orthopaedic journals on hip, knee and sports surgery and has done several pioneering works on computer assisted / navigated orthopaedic surgery.² He is also internationally quoted on his orthopaedic hip and knee sub-scoring system for identifying failing hip and knee implants.³

His areas of special surgical interest include

- **Sports Surgery** particularly of the hip, knee and ankle. (e.g. ACL, Meniscal repairs, Chondral surgery, Nerve entrapments)
- **Early intervention (Young adult) hip and knee surgery** – Hip arthroscopy and Knee arthroscopy, osteotomies and partial joint replacements.
- **Primary and Revision Hip and Knee Arthroplasty** (including navigation and patient specific instrumentation).

Yega consults at Spire Harpenden on Monday and Tuesday evenings, Friday afternoons and Saturday mornings, and in the Cobham clinic in Luton on Tuesday afternoons. Emergency appointments can be organised by his secretaries outside these times.



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Total Knee Replacement

Introduction

Your Knee Replacement

Your surgeon has given you this booklet because the option of surgical replacement of the knee joint has been discussed with you. This booklet explains what to expect before and after the operation and any significant risks that may occur. This booklet aims to make your recovery as straightforward as possible.

The information is a guide only and you should always refer to your doctor, nurse or therapist for individual advice and treatment.

Knee Anatomy

The knee joint is the largest joint in the body. It is a hinge type joint consisting of the thigh bone (femur) and the shin bone (tibia). There is also a further joint at the front of the knee between the knee cap and the thigh bone. If the smooth joint surfaces (cartilage) of the knee become worn or

damaged because of arthritis or injury the joint can become stiff and painful.

Figure 1 Normal knee



Figure 2 Arthritic Knee



What is a Total Knee Replacement?

A total knee replacement involves the complete replacement of worn joint surfaces of the knee joint (the thigh bone -femur) and the shin bone (tibia) with a metal and plastic joint. If however, only one side of your knee is worn, your surgeon may suggest a partial knee replacement.

In the United Kingdom in excess of 70,000 knees are replaced every year. (This figure is approximately 300,000 for the USA)

Figure 3 Total Knee Replacement

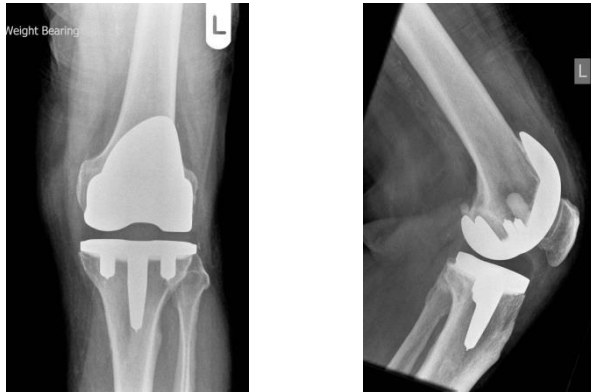


Figure 4 Partial Knee Replacement



The Benefits of a Total Knee Replacement.

The main benefits and aims are:

- To relieve severe pain and stiffness
- To stop the knee giving way or locking
- To improve mobility
- To do everyday things more easily.

What are the risks of surgery?

Anaesthesia and surgery involve a degree of risk to any individual, and hence your doctor would **always suggest that you have tried other means of treatment such as reduction in weight, modification of lifestyle activities, simple pain killers etc.**

Serious complications following total knee replacement surgery are rare. However, you should be aware of the complications that can occur. Where a complication occurs, it is usually dealt with satisfactorily and the patient recovers with no damage to the knee replacement.

The risks:

- **General Anaesthetic** – there is a small risk of a reaction and your anaesthetist will discuss this with you.
- **Infection** – there is a risk of surface wound infection or more seriously a deep infection of the knee which may need a further operation or removal of the joint. You will be given antibiotics to reduce this risk at the time of the operation. *If, after you get home, you notice pain, swelling and redness around the wound contact, your operating surgeon's team.*
- **Blood clot** in the leg (a deep vein thrombosis - DVT) which can sometimes break off and go to the lungs (a pulmonary embolus - PE) - treating this will involve medication which thins the blood (anticoagulants). Usually support stockings and anti-clotting medication are given during your time in hospital and continued for a short period after discharge to reduce this risk. *If you experience an increase in pain in your calf and/or increase in swelling after your discharge you should go to your Accident and Emergency department immediately.* Swelling of the leg is common and normally resolves on its own over a few weeks.

- **Haematoma** (collection of blood in the tissues) which on rare occasions need to be washed out
- Bleeding from stomach.
- Some patients may suffer from confusion post-operatively. This is usually temporary.
- **Stiffness** of the knee is usually temporary but occasionally may need a manipulation under anaesthetic, to restore an acceptable bend
- **Persistent pain** – there is a very small number of patients who, despite having a straightforward operation, continue to have discomfort which cannot be explained. On rare occasions this can be severe.
- Your artificial knee may become **loose** with time or **wear out** and need to be replaced (An artificial knee joint may last 10-20 years).
- Other serious but rare complications include damage to the **blood vessels and nerves** at the back of the knee, needing amputation of the leg.
- 0.1% of patients die in the period around the operation.

How to help yourself and reduce these risks?

Before Surgery:

- Stop smoking.*
- If you are overweight, reduce your weight.
- Have a well balanced diet and maintain your general fitness before surgery.
- Ensure your other medical problems such as high blood pressure, diabetes etc are well controlled and have these all checked by your GP or GP practice nurse.
- Please consider taking Iron tablets (200 mg three times a day, 2 weeks before surgery) – check with your doctor if you are uncertain.
- Ensure you do not have any active infection or dental problems.
- Stop any herbal medication and anti-inflammatory medication about 10 days before surgery.
- Have a positive frame of mind.

* Smoking increases surgical and anaesthetic risks. It impairs wound healing and can cause chest infections. If you do smoke we recommend you stop smoking at least 2 (preferably 6) weeks before surgery.

After surgery:

- Start moving your toes and ankles as soon as you can after the replacement.
- Do regular exercises and get moving as advised by the physiotherapist.
- Keep your knee elevated when resting and ice the knee regularly to keep the swelling down.

Procedure and preparation for surgery

What is Pre-assessment / Pre-admission?

Several weeks before your operation you will be asked to attend a pre-assessment clinic to check if you are medically fit to have your surgery. This can take several hours, so please be patient. The clinic is led by nurses who will ask about your health, past medical history, and circumstances at home.

Please bring with you:

- Details of any medical problems and previous operations.
- Any medicines or tablets (in their containers) that you are taking (including alternative medications / supplements).
- Details of any allergies that you have.
- Report any blisters, cuts or ulcers.
- A list of anything you wish to discuss about the operation.

A member of staff will listen to your heart and lungs and assess your general fitness for an anaesthetic.

At the clinic the following tests may be carried out:

- Your blood pressure, pulse, temperature, height and weight.
- An E.C.G. (heart tracing), to help check your heart is working normally.
- An X-ray (chest and / or knee)
- A urine sample.
- Swabs from your nose, the operation site and your bottom. This is to check for infection that could affect your recovery from surgery.
- The nurse will take any blood samples that are necessary and give advice and information about your stay.

If you have any specific medical problems, the nurse will tell the doctor and a further appointment may be made with the anaesthetist if necessary.

Preparation before coming to hospital

- You may need to **make arrangements for family or friends to help** with

heavier tasks after your operation e.g. shopping and housework

- You should consider **stocking up your freezer** with easily accessible food
- **Organise your home** so you do not have to bend or twist to reach things in low or high cupboards.
- **Stop blood thinning drugs** (e.g. Warfarin (Cumadin), Clopidogrel, Aspirin etc) as instructed in the pre-assessment clinic
- Please also read the above section on “How to help yourself and reduce risks” above.
- If you become ill with **a cold, flu, or develop an infection**, just before your operation you must contact your pre-assessment nurse / your operating surgeon’s team.
- A **shower, bath or sponge wash** should be taken the evening before and on the morning of your surgery. Use a shampoo for your hair. Remove any make up or nail polish and any jewellery (except your wedding ring).

- Pack your pyjamas / shorts or nightdress; slippers; loose comfortable clothes to wear during your stay; personal hygiene items (washing, shaving, toothbrush etc.); any current walking aids; your current medication
- **Check any fasting instructions** in your admission letter. (It is usually no eating anything for a minimum of 6 hours before your surgery. You may drink water (not juices etc.) up to 2 hours before surgery)

Coming into hospital

This usually occurs on the day of your operation – check your admission letter for details. You will be in hospital for usually 3 to 5 days.

Please follow instructions on your admission letter on where to report to on arrival at the hospital.

- A **nurse** will take your medical and personal details and carry out routine test e.g. blood pressure etc. You will be given a hospital gown and an identity band. You may also be given a special stocking to wear to reduce the risk of clots in your legs.
- Your **surgeon** will see you to explain the operation and to sign a consent form to confirm that you understand the operation and risks involved, and that you agree to go ahead with it. This may happen earlier. Your leg will be marked with a pen at the site of your operation.
- The **anaesthetist** will discuss with you the type of anaesthetic that you are having.

- A spinal or epidural (numbs you from waist down) and sedation or
- A general anaesthetic

- Any dentures can be removed at the last minute. Please advise staff of any crowns or capped teeth.

- You will be escorted to the operating theatre usually by a nurse.

The Operation

Anaesthetic Room:

- After the anaesthetist has given you your anaesthetic, you will be transferred into the operating theatre and positioned on the operating table.

Operating Room:

- After cleaning and draping (covering the site of operation with sterile towels), the surgeon will make a cut over the knee (usually 15 – 20 cm) and the damaged joint is replaced with the artificial joint.

- The wound will be closed using stitches and covered with a dressing and bandages.
- This will take approximately 1 to 2 hours.
- When you leave theatre you will usually have a drip inserted into your vein to give you fluids and medication. Sometimes a tube may also be placed in your bladder to monitor kidney function for a few days.

Recovery room:

- You will be closely observed in the recovery ward for usually 1 or 2 hours until you are fully recovered and transferred back to the ward.

After the operation

- Regular monitoring of your condition will continue.
- A spinal, epidural or nerve block anaesthesia will remain effective and a degree of numbness will be present in the lower body. This will be monitored and will gradually return to normal.

- You will be gradually encouraged to drink sips of water and progress onto a light diet.
- Start moving your toes and ankles to maintain your circulation and change your position in bed regularly to prevent sores as soon as you can.
- You will be given regular pain relievers to control pain – if this is not sufficient please advise your nurse and supplemental pain killers can be given.
- If you are finding difficulty passing water (urinary retention - inability to pass water) after the operation inform the nursing staff. It may be necessary to pass a catheter (fine tube) temporarily into the bladder to drain the urine.
- Blood tests and an x-ray are usually done the next day.
- Your drips and drains will usually be removed after 24 - 48 hours.
- The physiotherapist will visit regularly to give you exercises and advice on moving around (see exercises section at the end of the booklet). **The exercise program is a**

key part of your recovery. To help you walk, crutches or a walker are usually necessary during the early part of the recovery and can start as soon as the first day after surgery.

- The occupational therapist will advise you on coping with daily tasks.

Physiotherapy in hospital

- Your physiotherapist will give you a list of exercise and instructions.

Going home

Your doctor, nurse and physiotherapist will advise you when they feel that you are ready to go home. This is usually between day 3 and 5 depending on your progress.

- Arrangements will be planned with you and your relatives beforehand.
- Before you leave hospital, the nurse will check your wound and apply a new

dressing. A district nurse may visit you at home to check on the wound if necessary.

- Painkillers will be prescribed for you to take home and sometimes blood thinning medication may also be given.
- You should continue to wear the support stockings given in the hospital for about 6 weeks. They can be machine washed on a delicate cycle.
- You will be sent an appointment to see your consultant approximately 6 weeks after the operation.

At home

Pain – you can expect some pain but this will be different from the pain you had prior to your surgery. The pain should also be much less than when you were in hospital. Please take your pain killers as advised initially in the first week and then gradually cut down as the pain decreases.

Swelling – try to ice the knee after any exercise and elevate the leg (higher than your bottom) when resting. If you can tolerate antiinflammatory medication / have been prescribed it (e.g. Ibuprofen, Naproxen, Diclofenac etc.) it can also be used to reduce the swelling. If the swelling in the knee remains excessive you may need to cut back on your knee exercises. Swelling and bruising usually takes 6-8 weeks to settle but in some cases it can be a lot longer (more than 6 months).

- *If after you get home you notice increasing pain, swelling and redness around the wound contact your operating surgeon's team.*
- *If you experience an increase in pain in your calf and / or increase in swelling after your discharge, you should go to your Accident and Emergency department immediately*

Activities – gradually increase your activities every day e.g. start walking a little further each day. Start going outdoors when you feel comfortable. Also increase your exercises as pain allows. Continue with your walking aids and if you feel safe you can cut this down to one stick (used on the same side as the operated leg). Avoid any sporting, gardening or driving activities for the first 6 weeks until you have seen your doctor. I have no objections to my patients kneeling but I would suggest avoiding this for the first 6 weeks and then only with a cushion or padding under your knee. Sexual activity can return as soon as your knee feels comfortable.

You should aim to return to all your normal activities by 3 months. Try to avoid high impact activities such as jogging, running and jumping to preserve the longevity of your new knee. Light sporting activities such as walking, bicycling, bowling swimming, golf, doubles tennis and gentle skiing should be possible.

Stitches / Clips – if there are any to be removed this will usually be done at your GP's surgery or by the district nurse 10 – 12 days after surgery.

Showering and bathing - you can shower with a waterproof dressing in place. Once your wound is dry and healed (14 days after surgery) you should be able to take a shower without a dressing. Pat

the knee dry (rather than rub). Avoid your knee soaking in water for the first few weeks.

Massaging the knee and wound – once the wound has healed (usually after 14 days) gentle massaging around the wound with moisturising cream may assist in restoring a more normal feeling around the knee. It is quite common to notice some degree of numbness around the wound and this is normal. After six weeks, you can also use silicone gel or bio-oil on the scar to perhaps reduce the scarring further.

Follow up – You should receive an appointment approximately 6 weeks after surgery. If you do not receive an appointment – please contact the appointments desk at the hospital. If you are concerned about anything do not hesitate to ring your consultant’s secretary or hospital to make an earlier appointment.

FAQs

When can I drive?

You can usually return to driving 6 weeks after surgery – confirm this with your surgeon at your 6 week visit. I suggest you practise sitting in your parked car (on the drive) confirming you can slam on the emergency breaks safely and comfortably.[†]

When can I return to work?

This depends on the type of work you do and how you get there - but most patients return between 6 weeks and 3 months after surgery.

When can I fly?

There is a general increase in developing clots in the first 6 weeks after surgery. I would suggest not flying during this time. Short haul flights may be possible between 6-12 weeks. If you are flying within 3 months – consider using your embolic stockings and talk to your doctor about taking a small dose of aspirin starting a week before you

[†] It is the responsibility of the driver to ensure that he/she is in control of the vehicle at all times and to be able to demonstrate that is so, if stopped by the police. It might also be reasonable for the driver to check their insurance policy before returning to drive after surgery. (www.dvla.gov.uk)

flight (or a stronger blood thinning medication). Don't forget to drink plenty of fluids (not alcohol or coffee) to keep yourself hydrated and exercise your feet and legs whilst in your seat and move around the cabin when you can.

Will my knee beep when I go through the airport scanner?

With the increasing sensitivity of airport scanners this is highly likely. Archway scanners are variable but almost all handheld scanners would identify the knee replacement. You should be prepared to routinely explain that you have an artificial knee.⁴ If you are a frequent traveller keeping a copy of your post operative clinic letter may be useful.⁵

How long should I carry on with the exercises?

It is very important to do your exercises very regularly in the first 3 months after surgery. Improvements will continue to occur up to 2 years after surgery and therefore exercises should be continued.

Should I tell the dentist that I have a joint replacement?

Yes. Do let your dentist know that you have a joint replacement. Antibiotic cover is not routinely required before a dental intervention in

patients with artificial joints. However, a pre-existing dental infection requires antibiotic treatment and prophylaxis.⁶ The best prevention is to maintain good oral hygiene.

(Prophylactic antibiotics before dental procedures may be considered by your dentist if you have had a joint replacement within 2 years, previous periprosthetic (joint) infection, immunosuppressed states (diabetes, inflammatory arthritis, malignancy), and invasive dental work (extractions, implantation, root canal orthodontics)

Appendix 1: Exercises following knee surgery.

See www.orthoexercise.com

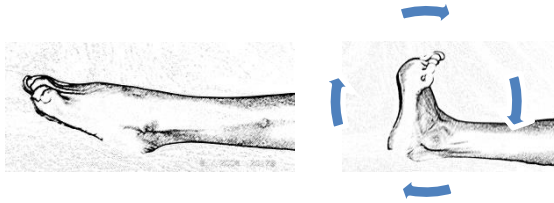
It is very important to carry out knee exercises to reduce your pain, optimise the function and speed up the recovery of your knee replacement. These exercises should be carried out little and often and only move as far as pain allows. Carry them out smoothly rather than jarring your knee.

Immediately after surgery:

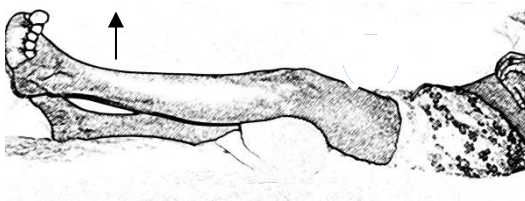
While you are in your bed:

1. **Breathing:** Breath in deeply pushing your ribs out and relax. Exhale fully and slowly and repeat 10 times per hour Ensure that you clear your chest by coughing. *These exercises are essential to minimise risks of getting a chest infection after any surgery.*
2. **Feet:** Pull both your left and right toes up towards you and then away briskly. Circle your feet in both directions. Repeat 10 times every twenty minutes. (Depending on the type of anaesthetic you have had, you may not be able to move your feet initially). *This exercise will improve the blood flow back from your legs and reduce the risk of clots occurring in the calf,*

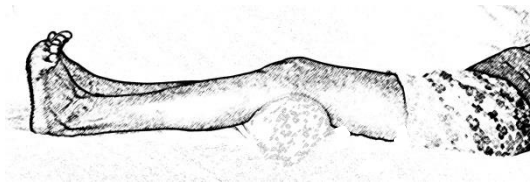
reduce swelling and also the risk of pressure blisters under your heel.



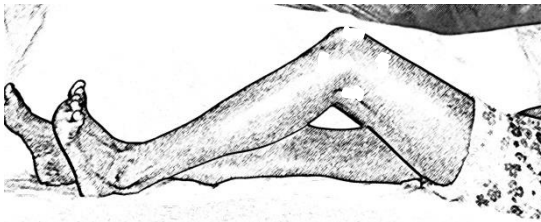
3. **Quadriceps:** Pull your toes up towards you, push your knee down and tighten the muscle on the front of the thigh. You can check this by putting your hand on the front of the thigh. Hold this for 5 seconds and relax.
4. **Vastus Medialis:** Turn your hip outwards and lift your heel. Hold for 5 seconds.



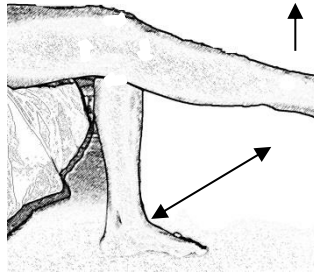
5. **Hamstrings:** Place a rolled up pillow or a wedge under your knee. Push your knee and heel down to tighten your muscles at the back of the thigh.



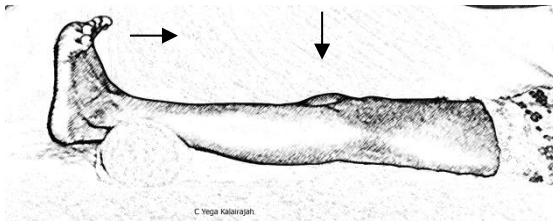
6. **Range of motion.** Once you feel your knee is strong enough you can start to bend your knee up as far as your pain allows hold this position for 5 seconds and then straighten. (i.e. slide your heels to your buttock)



7. Once you can sit out or sit over the edge of the bed, lower your foot of the operated leg gently to the floor. Try to get it to right angles or more (usually one of the factors that determine your date of discharge from the hospital). Once you have reached the maximum amount of comfortable bend try to straighten your leg slowly and hold for 5 seconds.



8. Once you are home / comfortable with the above exercises: All the above exercises should be continued and you should concentrate on building your muscles and range of knee movement further.
- i. Knee extension – place a rolled towel under your heel and straighten your knee – this will ensure you can get your knee fully straight. Hold for 5 seconds.



ii. Knee flexion –

1. Place your foot on a low stool. Lean your weight forward to bend the knee so as to feel a stretch at the front of your knee. Hold for 5 seconds.
2. While sitting with the knee bent place your good ankle over the operated leg's ankle and push the knee back. Hold for 5 seconds.

This should continue to improve the bend in your knee.

You should do all the above exercises at least 3 times a day and if possible more often (preferably 5-10 times every half an hour!) If they increase your pain then reduce the number or frequency of the exercises. **Walking exercise alone is not enough.**

Appendix 2: Keeping the swelling down.

It is normal for the knee to swell up after some activity for the first few months after surgery. It is however important to keep the swelling in the knee and the leg right down as this assists in the recovery of your knee. The measures you can take to reduce the swelling are:

- **Sitting:** Try to **avoid sitting** in a chair with your legs down for more than 30 minutes at a time. Prolonged sitting or standing will cause swelling in your leg during the first month after your surgery. So try to exercise and elevate your leg.
- **Elevate:** Elevate your leg for 30-60 minutes 3 times a day to reduce the swelling in your leg. The foot should be higher than your bottom.
- **Ice:** Can reduce pain and swelling. Place a wet towel directly over your skin over the knee and then place a bag of frozen peas on top. Keep the peas on for 20 minutes. This can be done before and / or after your exercises. Please check your skin from time to time.
- **Anti-inflammatories:** If you can tolerate anti-inflammatory tablets or creams such as Naproxen, Ibuprofen, Diclofenac –

consider using them to keep the swelling in the knee joint controlled.

If all these measures do not keep the swelling down, you may have to cut down your exercises. *Please seek advice if there is persistent swelling, increased pain, redness, restriction in movement and a temperature as this could suggest an infection.*

Appendix 3: Instructions for common activities after Total Knee Replacement

Climbing stairs

Upstairs: Place your non-operated leg first. Then your operated leg and the crutch at the same time. (If you are using a single crutch or stick, this should be routinely used on the same side as the operated leg).

Downstairs: Place your crutch first, then your operated leg and finally the non-operated leg.

Appendix 4: Outcome Scores

Please fill in the following standardised questionnaires so that we can record and monitor the function of your knee over the long term. Please tear this section out after completion and hand it to your consultant.

OXFORD KNEE QUESTIONNAIRE ^{7 8}

Name: Date.....

Side: Left/Right

When answering the questions please only consider how you have been getting on during the past four weeks

- | | | |
|-----------|--|--------------|
| 1. | How would you describe the pain you have usually from your left/right knee? | Score |
| | <input type="checkbox"/> None | 0 |
| | <input type="checkbox"/> Very mild | 1 |
| | <input type="checkbox"/> Mild | 2 |
| | <input type="checkbox"/> Mild Moderate | 3 |
| | <input type="checkbox"/> Severe | 4 |
| 2 | Have you had any trouble with washing and drying yourself (all over) because of your left/right knee? | |
| | <input type="checkbox"/> No trouble at all | 0 |
| | <input type="checkbox"/> Very little trouble | 1 |
| | <input type="checkbox"/> Moderate trouble | 2 |
| | <input type="checkbox"/> Extreme difficulty | 3 |
| | <input type="checkbox"/> Impossible to do | 4 |

3. **Have you had any trouble getting in and out of a car or using public transport because of your left/right knee? (whichever you tend to use)**
- No trouble at all **0**
 - Very little trouble **1**
 - Moderate trouble **2**
 - Extreme difficulty **3**
 - Impossible to do **4**
4. **For how long have you been able to walk before the pain from your left/right knee became severe? (with or without a stick)**
- No pain, even after more than 30 minutes **0**
 - 16 to 30 minutes **1**
 - 5 to 15 minutes **2**
 - Around the house only **3**
 - Unable to walk at all **4**
5. **After a meal (sat at a table), how painful has it been for you to stand up from a chair because of your left/right knee?** **Score**
- Not at all painful **0**
 - Slightly painful **1**
 - Moderately painful **2**
 - Very painful **3**
 - Unbearable **4**

6. **Have you been limping when walking, because of your left/right knee?**
- | | |
|---|---|
| <input type="checkbox"/> Rarely / never | 0 |
| <input type="checkbox"/> Sometimes or just at first | 1 |
| <input type="checkbox"/> Often, not just at first | 2 |
| <input type="checkbox"/> Most of the time | 3 |
| <input type="checkbox"/> All of the time | 4 |
7. **Could you kneel down and get up again afterwards?**
- | | |
|---|---|
| <input type="checkbox"/> Yes, easily | 0 |
| <input type="checkbox"/> With little difficulty | 1 |
| <input type="checkbox"/> With moderate difficulty | 2 |
| <input type="checkbox"/> With extreme difficulty | 3 |
| <input type="checkbox"/> No, impossible | 4 |
8. **Have you been troubled by pain from your left/right knee in bed at night?**
- | | |
|---|---|
| <input type="checkbox"/> No nights | 0 |
| <input type="checkbox"/> Only 1 or 2 nights | 1 |
| <input type="checkbox"/> Some nights | 2 |
| <input type="checkbox"/> Most nights | 3 |
| <input type="checkbox"/> Every night | 4 |

9. **How much pain from your left/right knee interfered with your usual work (including housework)?**
- Not at all **0**
 - A little bit **1**
 - Moderately **2**
 - Greatly **3**
 - Totally **4**
10. **Have you felt that your knee might suddenly “give way” or let you down?**
- Rarely / never **0**
 - Sometimes or just at first **1**
 - Often, not just at first **2**
 - Most of the time **3**
 - All of the time **4**
11. **Have you been able to do your household shopping on your own?**
- Yes, easily **0**
 - With little difficulty **1**
 - With moderate difficulty **2**
 - With extreme difficulty **3**
 - No, impossible **4**

12. **Have you been able to climb a flight of stairs?**
- Yes, easily **0**
 - With little difficulty **1**
 - With moderate difficulty **2**
 - With extreme difficulty **3**
 - No, impossible **4**

GUIDE TO SCORING THE OXFORD KNEE SCORE

Score 0 to 8	May indicate satisfactory joint function. May not require any formal treatment.
Score 9 to 18	May indicate mild to moderate knee arthritis. Consider seeing your family physician for an assessment and possible x-ray. You may benefit from non-surgical treatment, such as exercise, weight loss, and /or anti-inflammatory medication
Score 19 to 28	May indicate moderate to severe knee arthritis. See your family physician for an assessment and x-ray. Consider a consult with an Orthopaedic Surgeon.
Score 29 to 48	May indicate severe knee arthritis. It is highly likely that you may well require some form of surgical intervention, contact your family physician for a consult with an Orthopaedic Surgeon.

Appendix 5: Consent Form

See www.orthospecialist.info/consent

Reference

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