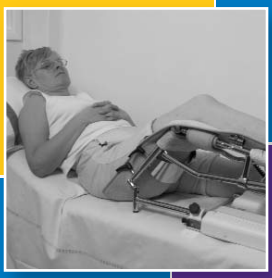
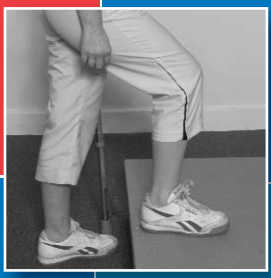
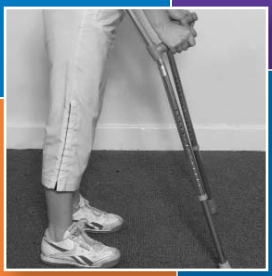
University Hospitals Coventry and Warwickshire NHS Trust

KNEE REPLACEMENT

A Guide for Patients

PATIENT NAME	
HOSPITAL NUMBER	
PROCEDURE	
CONSULTANT	



This leaflet was produced by the:

Orthopaedic Multi-disciplinary team

Consisting of:
Orthopaedic Consultants, Nursing Staff,
Physiotherapists, Occupational Therapists,
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To be revised March 2009

University Hospitals
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Coventry. CV2 2DX

Web: www.uhcw.nhs.uk

Health Information Centre

This is situated in the Main Entrance opposite the reception
The Staff can:

- Provide information on any health related topic
- Refer you to other agencies, both local and national
- Provide internet access

Open Monday - Friday 9.00am - 5.00pm
Telephone: 024 7696 6051

If you would like this information in large print, braille, audiocassette, video or translated into another language please speak to a member of staff.

March 2008

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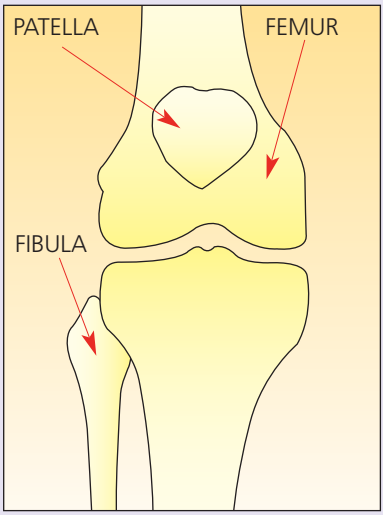
INTRODUCTION

Knee replacement is performed for severe arthritis of the knee causing disabling pain. This booklet aims to provide information to help you through the recovery period, whether you have had a partial knee replacement (unicompartmental or patella resurfacing) or total knee replacement.

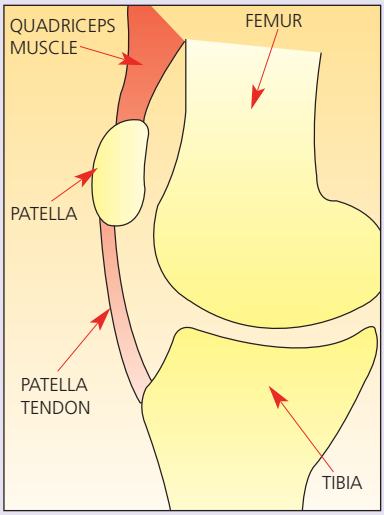
The new joint is made up of metal components which replace the ends of the femur (thighbone) and tibia (shinbone) and a plastic component which sits on the tibia and separates them. The new surface of the patella is also made of plastic.

To get the best results from your surgery you will need to closely follow the advice of your therapists and nurses. Give yourself a head start by practising the early bed exercises in this booklet. Share the information in this booklet with your family and friends so that they can support you during your rehabilitation period.

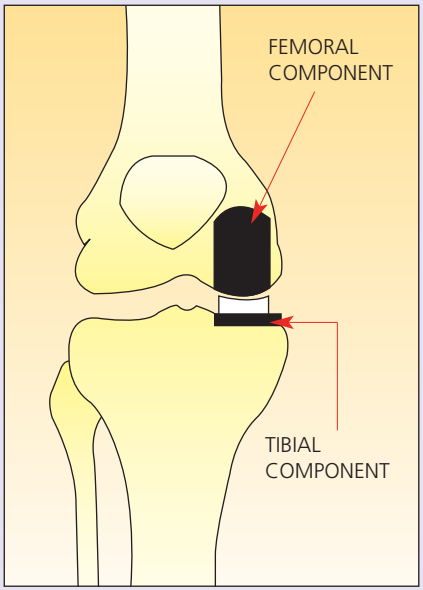
Please note: throughout this booklet we have used a patient's right lower limb to show positioning of the operated limb.



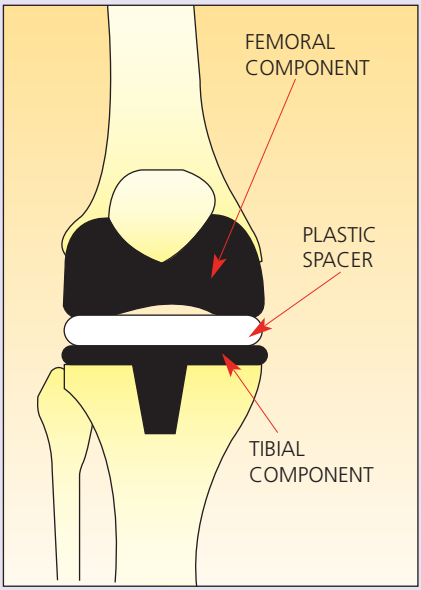
NORMAL KNEE FRONT VIEW



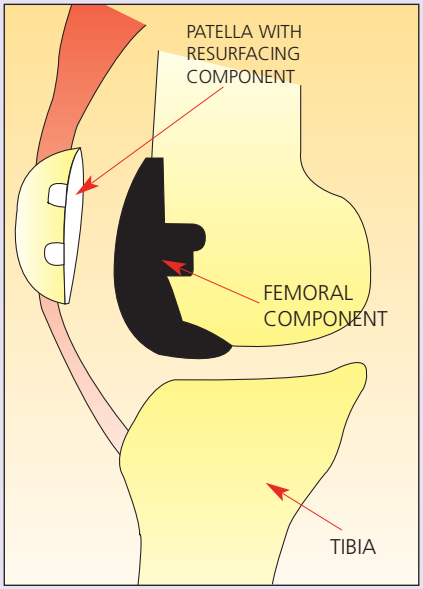
NORMAL KNEE SIDE VIEW



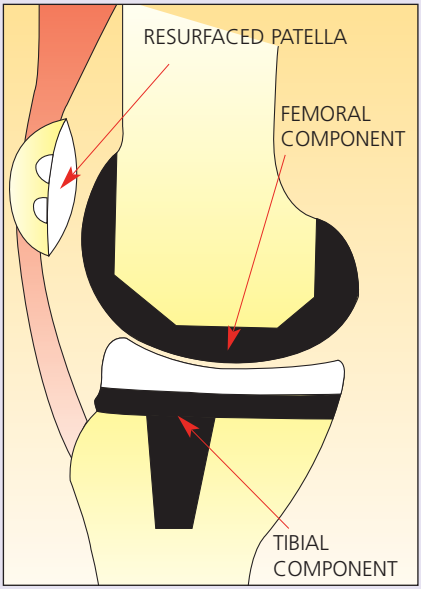
UNICOMPARTMENTAL KNEE REPLACEMENT



TOTAL KNEE REPLACEMENT



PATELLA-FEMORAL JOINT RESURFACING



TOTAL KNEE REPLACEMENT WITH PATELLA-FEMORAL RESURFACING

DISCHARGE PLANNING

The length of your hospital stay will depend on the type of replacement and the number of joints undergoing surgery. You may need to use sticks or crutches for the first few weeks.

- Unicompartmental 2-3 days
- Total knee replacement 3-4 days
- Bilateral 4-7 days

You can prepare for some of these short term changes by reading through this booklet and completing the pre admission checklist.

We hope your stay at University Hospitals Coventry and Warwickshire NHS Trust is comfortable and wish you a long and happy life with your new knee.

You may be visited by a member of our **C.R.E.D.I.T** team **(Coventry and Rugby expedient discharge initiative team)** on discharge home.

Pre-admission Check List

Tick the box when you have organised the following ready for your admission to hospital.

- Help with household tasks (*see page 26*) ☐
- Food cupboards and freezer stocked up ☐
- Help with shopping ☐
- Help with gardening and pets ☐
- Comfortable shoes or sandals (no backless slippers) ☐
- Cool, loose fitting clothes. e.g. shorts or skirts ☐
- Early knee exercises practised ☐
- Transport to return home and for future appointments ☐
- Questionnaire from Therapist completed if both knees are to be replaced at the same time ☐

NB. If you have been unable to organise any of the above, inform the therapy staff at Orthopaedic preparation clinic or your nurse on admission to the ward.

BEFORE YOUR SURGERY

Initially your GP will have arranged for you to be seen by a consultant at the hospital. It may be possible for you to attend the Pre Anaesthetic Assessment Unit (Part One of your examination) on the same day as your consultation. After your consultation you will be sent an appointment to attend the:

Orthopaedic Specific - Preparation for surgery

This is Part Two of your examination and should occur shortly before your operation. The Orthopaedic team will carry out or organise a series of minor tests to ensure that you are fit for your operation. These might include:

1. Up to date x-rays of your knee and chest if required.

2. ECG (an electro cardiograph) - a tracing of your heartbeat.

3. Blood tests - these are to assess your general health and to match blood of your own type in case you need blood after your operation.

4. Urinalysis (Urine test)

To ensure your visit is comfortable you may like to bring the following with you to clinic:

Reading glasses - for filling in the necessary paperwork

A member of your family or a friend - to aid communication or mobility.

A drink or snack - (especially if you are diabetic)

Information and Therapy Session

This is a group session run by a physiotherapist who will start your rehabilitation programme. It is also your opportunity to ask any questions you may have.

A video highlighting the points you will need to consider before and after surgery may be shown. You will be referred to the Occupational therapist if the physiotherapist identifies a need. Please bring this booklet with you, along with any sticks or crutches you already use.

Diet

Prior to your operation it is important that you are in good health. In order to achieve this, it is essential that you eat a correct diet. For most people the move towards a healthy balanced diet means eating more bread, breakfast cereals, potatoes, pasta, rice and more fruit and vegetables.

Above all we should aim for variety in our food.
If you are **OVERWEIGHT**

1. Reduce the fat in your diet.
2. Cut down on sugary foods.
3. Eat more wholegrain foods.
4. Keep alcohol to sensible limits.

Understanding the risks and benefits of surgery

It is important to recognise that the operation of knee replacement carries various risks. At the end of the booklet we have included a section of what you can expect and also the possible risks of surgery. Your surgeon will want to know that you have understood the potential risks and will be happy to answer your questions.

Coming into hospital

When you arrive on the ward you will meet the nursing staff who will plan and co-ordinate your care during your stay with us and ensure everything you require is arranged for your discharge. The physiotherapist will visit you to ensure that you carry out routine exercises to help you initially after your operation.

Your Anaesthetic

Your anaesthetist will come and discuss the anaesthetic with you prior to surgery. Your anaesthetist is responsible for:

- Your well being and safety throughout your surgery
- Agreeing a plan with you for your anaesthetic
- Giving your anaesthetic
- Planning your pain control with you
- Managing any transfusions you may need

We provide more comprehensive information about anaesthesia in leaflet form for you to read beforehand so that you are well informed of what to expect, how to prepare for your surgery and what choices may be open to you.

Please read this information and you can then ask the anaesthetist about any points specific to your care. Spinal or epidural anaesthetics may be mentioned: both these techniques cause complete numbness from your waist down and can be used with a general anaesthetic or heavy sedation. They involve an injection of local anaesthetic to your back before the start of the operation and following this, your legs become warm and numb and the muscles feel weak. After your operation, the feeling in your legs returns to normal over a period of hours.

Additional information may be found on the Royal College of Anaethetists website: **www.rcoa.ac.uk**

OPERATION DAY

You must not eat or drink for six hours before your operation - if you do your operation will be cancelled. A bath or shower will be necessary followed by a pre-medication, although this is not always given. To go to theatre you will be asked to wear a gown. After the operation is performed you are transferred to the recovery room where you will remain until you are properly awake. At this point you **MAY** be aware of:

1. An oxygen mask
2. Drip (this provides fluids until you start drinking)
3. Cuff around your arm recording pulse and BP
4. Dressings over the wound
5. Drain (this collects excess blood from the knee)
6. Wrist button for pain relief
7. Splint (this holds your knee straight but is not always used)
8. Trough (A foam support which keeps pressure off your heel)

After your operation

After your operation do not be too concerned if you cannot immediately move your operated leg. Some nerve blocks which are part of your anaesthetic take a number of hours to wear off. Attempt all recommended exercises regularly until movement and sensation returns.

Please note that the Trust has a minimal lifting policy. Please help staff as much as you are able by using your arms and unoperated leg to move yourself around the bed.

Pain

Patient's experience of pain varies a great deal. It is essential that you have regular and adequate analgesia (painkillers) so that you can begin to move and gain control of your operated limb. Let the nursing staff know how you feel as they can vary your dosage, change analgesics and give anti sickness drugs.

Patient Controlled Analgesia (PCA)

You may be given a wrist band with a button when pressed firmly for a few seconds delivers a strong analgesic (painkiller). Try to use this regularly rather than waiting for the pain to return. Inform staff if you need something for sickness and take some deep breaths if you feel dizzy or sleepy. Your oxygen will also help to reduce these feelings.

Care of your wound

Following your operation your wound will be covered with a dressing and your knee heavily bandaged. You may have a small tube (a drain) inserted into your leg beside your wound. This will be attached to a bottle which will collect any drainage from your wound. Your wound may bleed. This is normal and nothing to worry about. Your dressings will be changed the day after your operation and a lighter dressing applied which allows knee movement.

Cryocuff

Some of the pain that you are experiencing is caused by the swelling and heat that develops around your knee. A "cuff" which is wrapped around your knee and filled with iced water from a "cooler" can be particularly helpful in reducing pain and swelling.

Ask staff to assist you in using the cryocuff until you are familiar with it. (See diagram) Re-chill cuff once it is warm.

To fill cuff:

- Connect blue tube to cuff
- Open cooler air vent
- Raise cooler above cuff until it is full
- Close cooler air vent and disconnect tube.

To empty cuff and re-chill

- Connect blue tube to cuff
- Open cooler air vent
- Lower cooler to floor
- Completely drain water from cuff
- Wait 2 minutes for water to cool before refilling cuff.

The ice in the cooler will need replacing approximately every six hours.

EXERCISES

Splint and trough

A knee splint may hold your knee in a straight position after surgery. This is because your muscles may not control and therefore protect your knee straight away. However, with the help of your physiotherapist and the early exercises in this booklet, you will soon be able to discard the splint. This is usually possible during day one after your operation. Please do not get out of bed or walk without your splint before your physiotherapist has assessed your abilities. Your operated limb may be resting on a trough or pillow. This keeps your heel off the bed and prevents pressure, and therefore sores developing, on your heel. Once you can lift your foot off the bed independently it is no longer essential.

Early bed exercises

It is quite safe for you to carry out certain exercises as soon as you wake up from your anaesthetic. The first three should be started as soon as possible.

1. Breathing exercises

Take a deep breath in through your nose. Your stomach should rise out.

Breathe out through your mouth. Repeat three times every 30 minutes.

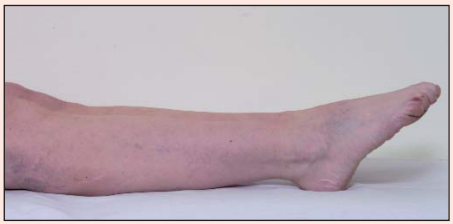
If you feel any phlegm in your throat have a cough to clear it.

Inform your physiotherapist of any chest problems. This exercise helps to maintain a clear and healthy chest. Your chest is more susceptible to infection after an operation due to sleepiness and prolonged lying in bed.

2. Foot and Ankle exercises

Lying on the bed with your heels free. Move your ankles briskly by pointing your feet up and down.

Do this for 10 seconds. Repeat every 30 minutes.



This exercise improves the circulation in the lower limbs,helps to prevent the formation of deep vein thrombosis (blood clots), reduces swelling and encourages the return of skin sensation.

3. Knee bracing (Static quadriceps) exercises

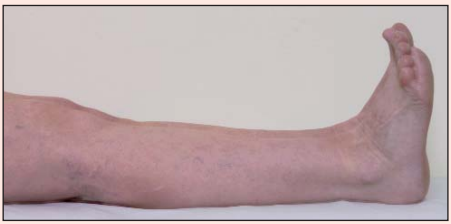
Lying down or slightly reclined.

Bend your ankles by pulling your toes towards your face. At the same time brace your knee into the bed so that it is straight.

Imagine that you are trying to squash a tennis ball under your knee.

Hold the contraction for 10 seconds.

Repeat 10 times every hour.



This exercise helps you to regain control of your knee ready for standing and walking. It also helps you to achieve a straight knee.

FURTHER EXERCISES

Your physiotherapist will be happy to assist you with the following exercises on the day after your operation.

When your technique has been checked, add the selected (ticked) exercises to your routine.

Practise the following exercises independently, at least 3 times a day. e.g.morning, afternoon and evening.

It is important that you are available for physiotherapy throughout the day. A portion of your visiting time will inevitably coincide with physiotherapy time. Discuss any special requests with the physiotherapy team and they will be as flexible as possible.

4. Straight leg raising ☐

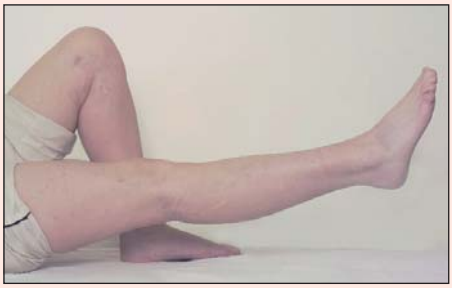
Lying down or slightly reclined.

Lock your knee straight as in exercise 3.

Lift your whole leg 10cm/4 inches off the bed.

Aim to keep your leg absolutely straight.

Hold for 5 seconds.
Repeat 10 times

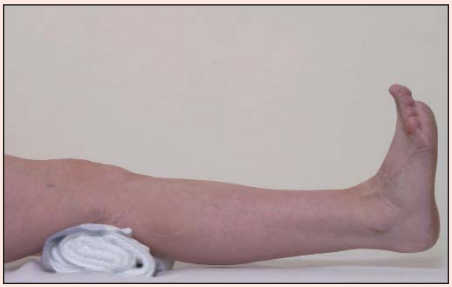


This exercise challenges your thigh muscles and tests their ability to support you when you are standing.

5. Knee extension (inner range quadriceps) exercise

Lying down on the bed with a rolled up blanket under your knee so that it rests in a bent position, lift your foot off the bed whilst keeping your thigh on the blanket; Straighten your knee maximally.

Hold for 5 seconds
Repeat 10 times

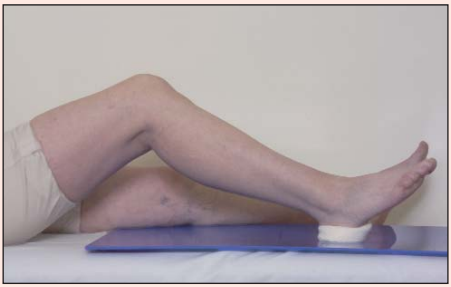


This exercise strengthens your quadriceps (thigh) muscles in preparation for steps and stairs. They provide stability from in front of your knee.

6. Knee bending (flexion) on the sliding board

Lying on your back with the sliding board under your leg and the doughnut under your heel.Draw your heel towards you until you feel a "block" to further movement. Now pull your heel towards you and through the stiffness for 5 seconds.

Straighten your knee slowly.
Repeat 10 times



This exercise will improve your knee bend which is important for getting into a car and sitting. Your hamstring muscles will become stronger and provide stability from behind your knee.

FUNCTIONAL ACTIVITIES

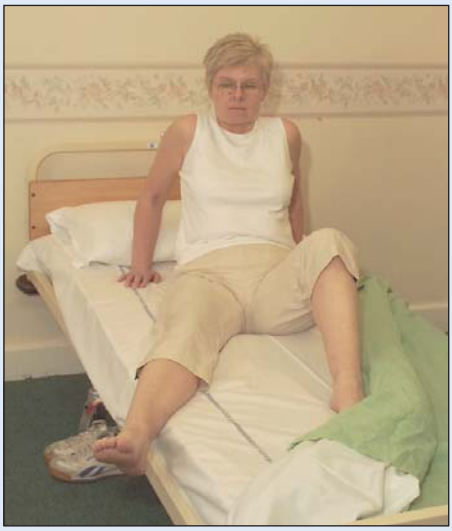
Whilst in hospital the staff aim to help you carry out your normal activities safely until you can manage them independently.

Getting into and out of bed

The physiotherapy team will show you how to get into and out of bed 24 hours after your operation. You may be advised to spend the first post operative day having physiotherapy and exercises on the bed. This will depend on the type of surgery and how well you are feeling.

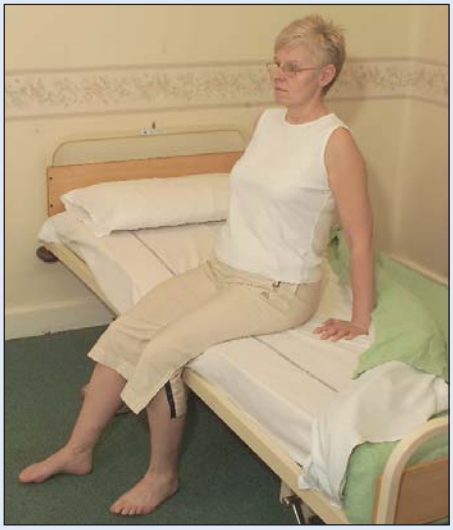
Getting out of bed

This will be a lot easier if you have regularly practised your knee exercises. If you are unable to do a straight leg raise (see exercise 4) with your operated leg, you may need to wear a knee splint until you regain control of your muscles. Use your thigh muscles to move your operated leg in stages towards the side of the bed. Put your hands on the bed and slightly behind you to push yourself forward to the edge of the bed.
Do not allow your knee to bend too soon by dropping it over the edge of the bed. Staff will assist your leg to the floor and help with your splint if you have one.



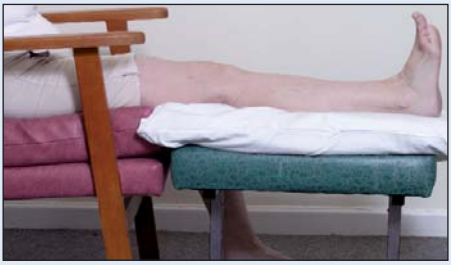
Getting into bed

Sit down on the side of the bed close to your pillows. Try to shuffle your bottom backwards and diagonally towards your pillows until both of your knees are completely on the bed. You will then find it easier to gradually lift your operated leg onto the bed.



Sitting in a chair

You may be encouraged to sit out in a chair during mealtimes and for washing and dressing. During the first two days after surgery ensure that your leg rests on a stool at these times.



You should not sit with your leg hanging down for long periods as this will tend to lead to prolonged swelling of your leg.

Exercises in the sitting position

By the second day after your operation you will begin to notice improvements in your knee bend,muscle power and walking. It is an excellent time for concentrating on your knee without the distractions and responsibilities you have at home.

The healing process will reduce pain with time but increase stiffness.

Therefore the flexibility of your knee is best achieved as soon as possible.

You may experience an increase in knee stiffness on waking each morning. This is because your knee is less active at night.

You will need to work hard in the morning to achieve the same range of movement you had the previous evening. Aim to improve range throughout the rest of the day.

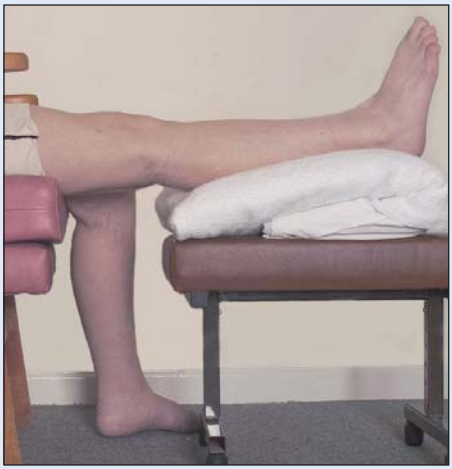
Your physiotherapist will advise you when to progress to the next set of exercises.

7. Knee stretching/ extension

Sitting on a chair with your operated leg on a stool and a pillow under your heel.

Stretch your whole leg by pushing your heel towards the opposite wall.
Hold the stretch for 5 seconds.

Relax your leg slowly from your toes to your hip. Rest and repeat.



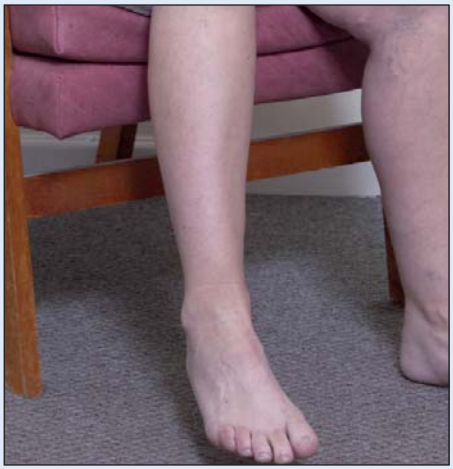
This exercise helps to stretch tight muscles at the back of your leg (hamstrings and calf muscles). If they are significantly preventing your knee from straightening, practise this exercise hourly for 10 minutes each time.

8. Knee bending (flexion) in sitting

Sitting in a chair or on the side of a bed with a rolled up towel under your thigh. Bend your knee as far as you can, holding the end of the range for 5 seconds. Slowly release the contraction letting your leg hang down to the floor.

If appropriate, your physiotherapist may advise you to use your unoperated leg to assist your operated leg to bend.

Repeat 10 times



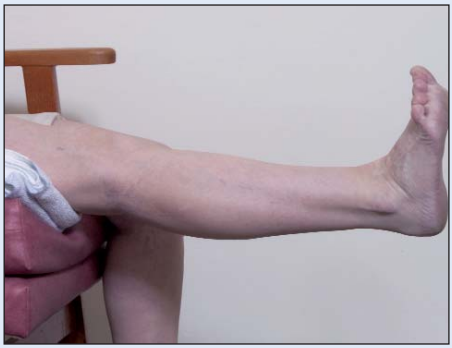
This exercise helps your knee to bend with the assistance of gravity. Your goal is to sit comfortably in a chair with your knee at a right angle as soon as possible. A good bend will be needed in the future for stairs and getting up from a chair.

9. Knee straightening (extension) in sitting

Sitting in a chair or on the side of a bed with a towel rolled up under your thigh. Lift your leg from the bent position until your knee is as straight as can be.

Hold for 5 seconds.
Lower you foot to the floor.

Repeat 10 times



This exercise works your thigh muscle throughout its range. Well done if you are now ready for this exercise. Your hard work is producing results. Try alternating legs and compare right and left.

Walking

After your operation you will need to use a walking aid for the first few weeks. The physiotherapist will show you how to use the walking aid safely and give you advice on your gait (walking pattern). Always check your standing posture and the position of your operated knee prior to walking.

Using a walking frame

After your operation, you will probably find that you feel more confident using a walking frame especially when walking unsupervised.
The sequence is as follows.

- Move the frame forward
- Take a small step forward with your operated leg
- Brace the knee of the operated leg
- Step through with your other leg whilst using the frame for support.

N.B. Do not walk too close to the frame

Using elbow crutches

Once you are confident with the walking frame you will progress to using elbow crutches or sticks.

To get from sitting to standing

With your elbow crutches:

- Move your body forwards to the edge of the chair.
- Hold your crutches (with handles facing each other) in the hand which is opposite to your operated leg.
- Bend the knee of the unoperated leg whilst keeping your foot in contact with the floor.
- Use your free hand to push down on the arm of the chair.
- Use the thigh muscles of the unoperated leg maximally until standing.
- Transfer one crutch to each hand.
- Reverse this procedure to sit down.

Walking with crutches:

- Move crutches forward together (elbows in to your side)
- Step forward so that the affected leg is level with the crutches.
- Place weight as necessary, through your arms onto crutches.
- Brace the thigh of the operated knee.
- Step your other leg forwards past your operated leg.

Using sticks

If you are able to walk using sticks instead of crutches your physiotherapist will offer advice on your walking pattern. When you feel confident enough to use only one stick or crutch, hold it in the opposite hand to your operated leg.

It is advisable to gradually increase the distance walked as able.

Stairs

When you are using sticks or crutches independently you will practice steps and stairs with the physiotherapist until you are both confident that you are safe.

To go upstairs

- Hold onto handrail if available and use the stick/crutch in the opposite hand as usual.
- Place your **"good"** (unoperated) leg up first.
- The **"bad"** (operated) leg follows with the help of the sticks/crutches.

To go downstairs

- Put the **sticks/crutches** down onto the next step to assist the**"bad"** (operated) leg **down** first.

- The **"good"** unoperated leg follows.

While you are in hospital you may be taught how to manage stairs, both with and without a handrail. You may also be shown how to hold both crutches in one hand. If you have difficult or unusual steps or stairs inside or outdoors, please inform your physiotherapist. Go up one step at a time until you are stronger.

ADVANCED/HOME EXERCISES

When you have practised the stairs you will be ready to practise some or all of the following exercises. Practise them three times a day or as advised by your physiotherapist.

Exercises in standing

10. Knee bends/ Squats

Standing whilst holding onto a stable surface.
Slowly bend your knees.
Keep your heels on the floor.
Slowly return to standing by straightening your knees.

Repeat 10 times.

This exercise encourages the muscles around the knee to work together in a smooth and coordinated fashion. It prepares your knee for getting up and down off low chairs and toilets.

11. Heel raises

Standing whilst holding onto a stable surface.

Push up onto your toes.
Slowly lower your heels

Repeat 10 times.

This exercise will improve the strength of your calf muscles. These are used when walking and going up stairs.

12. Knee bends

Standing whilst holding onto a stable surface.

Bend your operated knee behind you as far as you can.

Slowly lower your foot back to the floor.

Repeat 10 times

This exercise will help you to bend your knee when you are walking. You may be walking with a stiff operated knee.

13. Step ups

Standing at the foot of the stairs or in front of a small step. Use the handrail or a crutch for balance if necessary.
Bend the operated knee as you place the foot up onto the step. Return the foot to the floor.

Repeat 10 times.

Progression: Once you are comfortable with this exercise you can begin to bring your weight forward over the foot on the step. You will feel the knee bend more, try to maintain this stretch for 10 seconds. Relax the knee in between stretches and repeat 10 times.

This exercise helps you to increase the bend in your knee, and encourages the muscles around the hip and the knee joints to work in a co-ordinated fashion, which is important when using the stairs.

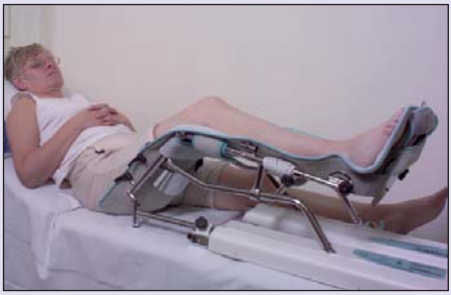
14. Seated knee bends

Sitting in a firm chair with both feet flat on the floor. Slide the operated foot backwards, causing the knee to bend until you feel a stretch. Now, keeping your foot firmly on the floor, slide your bottom forwards as far as you can. This will cause the knee to bend further. You should hold the stretch for 10 seconds before relaxing

This is an advanced exercise which helps you to further improve the bend in your knee

Continuous Passive Motion (CPM)

Patients with stiff knees before their operation, who find bending their knee difficult, will need extra help to bend their knee after the operation. A C.P.M. machine is a device which supports thepatient's lower limb and bends and straightens the knee. This occurs without any muscle action by the patient (i.e. passively). Your physiotherapist may use this device during your rest periods to help prevent your knee becoming stiff or to assist with the reduction of swelling.C.P.M is often used for periods of up to two hours at a time and sometimes three times a day. However it is important that you still continue to exercise as recommended by your physiotherapist. The nursing staff will also assist in the setting up and removal of the C.P.M. The physiotherapist will show you how to stop AND start the machine and alter the range of movement if necessary.



Using Ice Packs at home

If you have found improvements in your knee as a result of using the cryocuff or ice packs, you may wish to continue use at home.

To apply an ice pack:

1. Expose your knee fully by removing clothing.
2. Leave a waterproof dressing on wound areas.
3. Place a clean tea towel over knee.
4. Place a small bag of crushed ice, gel pack or frozen peas across the joint.
5. Leave ice for approximately 20 minutes before removing it unless it becomes too uncomfortable before this. (If pain increases with use of ice discuss this with your physiotherapist.)
6. Apply before each exercise session or more frequently, allowing a period of two hours between each application.

N.B. If you suffer from any of the conditions below please speak to your physiotherapist or GP before application.

- Hypertension
- Fragile skin
- Cardiac disease
- Loss of skin sensation

Do not allow your wound to become wet.

Do not put ice or frozen peas directly onto unprotected skin as this may cause an ice burn and damage your skin.

EVERYDAY ACTIVITIES

Getting dressed

You will be encouraged to dress in comfortable everyday clothes the day after your operation. Clothes should be cool and loose and allow access to your knee (e.g. shorts and skirts). Staff will assist you until you can manage independently again.

Getting on and off the toilet

This is the same sequence as getting off a chair. (See using crutches). Whilst on the ward, you will have handrails and frames around the toilet to assist you. You may miss this help once you are home. Before you are discharged, practise getting on and off the toilet without extra support, in the same manner as at home. Your physiotherapist will practise with you. If you are already having difficulty with getting on and off the toilet at home or anticipate any problems, bring the completed questionnaire (at the back of this book) to hospital with you.

Bathing and showering

It is essential to keep your wound dry to reduce the risk of infection. Once it has healed you may return to your usual regime. Take all usual safety precautions. (For instance use a non -slip mat in the bath /shower.) Wait until your muscles are stronger before getting into and out of the bath. You may like to have someone present in the house during your first attempt.

Driving

You are advised not to drive until you are able to perform an emergency stop adequately. Make sure that your physiotherapist and consultant are happy with your knee's capabilities before you drive your car. Practise somewhere quiet before venturing onto the road. It will take approximately six weeks after surgery until you are safe to attempt to drive. Push the front passenger seat backwards, reclining it slightly to give you more room when getting in and out of a car.

If you are having problems, discuss this with the physiotherapist at the information session

Household tasks

All activities of daily living will be difficult whilst you are using sticks or crutches. You will require help with household tasks, which involve carrying items or kneeling. You are encouraged to avoid kneeling for the first few months. When you start kneeling, introduce it gradually, starting on a pillow before proceeding to kneel on a cushion or carpet. Sometimes the scar remains sensitive and not everyone finds it possible to kneel after a knee replacement. Contents of your cupboards should be arranged so that essential items are within reach without bending or stretching.

Returning to work and hobbies

Discuss your lifestyle and activities with your consultant at your clinic review at six weeks. They will be happy to advise you on returning to your normal activities.

Such as:

- **Driving** (inform DVLA and Insurance company)
- **Swimming**
- **Light Gardening**
- **Dancing**
- **Walking**
- **Exercise Classes** (Ensure that the instructor is aware of your knee surgery)
- **Kneeling**

GOING HOME

The criteria for discharge from hospital are that you are now:

- Comfortable on oral pain killers (analgesia)
- Able to make progress with your exercises independently
- Able to manage stairs independently as necessary
- Have the necessary support at home (See pre admission checklist)

On discharge from hospital you will be given:

- Your medicines to take home
- An outpatient appointment card with a date to return to clinic
- Instructions for removal of the stitches or clips
- Your Outpatient Physiotherapy appointment card to attend a knee class and/or individual treatment session

Your family doctor will be receiving notification of your operation and discharge from hospital.

Do's and Don'ts

This section summarises the main things you can do to optimise your new knee.

✓ **Do** continue to follow the advice and exercises in this booklet as advised by your physiotherapist.

✓ **Do** massage the skin around the knee to help the skin become more supple and mobile.

✓ **Do** use your walking aid as advised.

✗ **Don't** sit with your operated leg hanging down for long periods.

✗ **Don't** drive until physically able.

✗ **Don't** sit or lie with anything rolled under your knee as this may cause your knee to stiffen and prevent it from straightening.

✗ **Don't** sit or lie with your legs crossed.

C.R.E.D.I.T

You may be visited at home by a member of our **C.R.E.D.I.T** team (Coventry and Rugby expedient discharge initiative team) who can offer advice and guidance until your outpatient physiotherapy appointment.

Outpatient Physiotherapy

On your discharge from hospital you will need to continue your exercise at least three times a day at home. It is essential that you apply an ice pack regularly (as advised by your physiotherapist) and take appropriate pain relief.

Follow up physiotherapy in your local Ourpatient department will be arranged to help you progress your exercise and activity levels. During this time you will also need to work hard on your home exercise to optimise the outcome of your surgery.

Clinic Review

Approximately 6 weeks after your operation, your consultant will assess your progress. This is an opportunity to have your questions answered and to discuss your safe return to normal activities.

You may find it helpful to list any questions in the back of your book ready for discussion with your consultant.

EXPECTATIONS AND POTENTIAL PROBLEMS

This section is not meant to be frightening but it is important to be aware of what should be expected following surgery and how the intended gains need to be balanced against the risks of the operation.

What can you expect?

The aim of the operation of knee replacement is to relieve the pain felt in your knee while improving or maintaining your ability to function. You should be able to achieve at least the same range of knee movement that you had prior to surgery and with hard work and physiotherapy following surgery you may achieve more movement.

Knee replacement can be an emotional and physical experience. There may be some days after your operation when you feel a little low and tired. This may continue in the early stages after you are discharged home.

An artificial knee joint is not quite the same as a "normal knee" and with certain movements it is possible to notice a clunk as the metal and plastic surfaces separate a little and then come into contact. This is nothing to worry about and is usually easily ignored after a while.

Early "Normal" Concerns Following Surgery

The following is a list of common events that occur following surgery:

- **Swelling:** Swelling or "effusion" in the knee is usual until up to three months after surgery.
- **Difficulty kneeling:** It may take a while to tolerate kneeling but with gradual progression through use of a cushion then carpet and finally a hard floor, this usually improves. However two thirds of patients do not find it easy to return to kneeling.

- **Bruising:** It is usual for bruising to appear down the leg and up into the thigh. Bruising can be surprisingly tender and may take four to six weeks to disappear.

- **Numbness around the knee.** Numbness on the outer side of the knee scar is common. This can be quite disconcerting for a few months and some residual area of reduced sensation may persist in the long term. Usually this does not cause any functional problems.

POTENTIAL PROBLEMS AND RISKS OF SURGERY

As with any major operation there are risks involved and you should be aware of them. Particular health problems should be raised with the medical team who can discuss with you the possible benefits of surgery in relation to the level of risk, so that you can make an informed decision as to whether you wish to have the operation.

As a rule of thumb nine out of ten knee replacements produce a very satisfying result but one in ten patients may have a few problems following surgery. These can range from minor to severe problems as outlined below. These risks should be discussed with your surgeon so that you are fully aware of the potential hazards. Your surgeon should be able to tell you if you are at any increased risk of complications.

- **Infection:** the approximate risk is 2% and many precautions are taken to avoid this during your hospital stay. Deep-seated infection can result in the need for the knee replacement to have to be redone in order to eradicate it. In severe infections it may be necessary to remove the joint completely and fuse the knee straight. This is very uncommon however. It is therefore very important to look after the wound following surgery. Ideally, all infections should be cleared up before your operation, e.g. tooth abscess, infected toe, and urine infections. Even minor infections can

cause bacteria to circulate through your body and cause infection of the new joint. If you have any infection before attending pre-operative assessment clinic, see your GP. If you still have an infection when you attend the pre-operative assessment clinic, inform the staff there, as it might be wise to postpone the operation.

- **Loosening and wear of the components over time:** Current research indicates that approximately 90 - 95% of initially satisfactory knee replacements are still satisfactory at ten years in the average patient and approximately 80 - 85% are still satisfactory at fifteen years. It is possible therefore for the knee replacement to last for many years. The surgery can be redone but that is a technically difficult operation with less predictable results.

- **Deep vein thrombosis and pulmonary embolism:** This is a risk of all operations where blood clots can develop in the calf and possibly lead to an embolism affecting lung function. A pulmonary embolism can be extremely serious and precautions are taken to avoid this complication ranging from the use of tablets or injections, wearing elastic stockings or using foot pumps until you are sufficiently mobile out of bed. A degree of calf swelling is usual after the operation and does not necessarily indicate a deep vein thrombosis. The longer you are in bed, the greater the risk of a blood clot forming, which is why we encourage you to get up as soon as possible after the operation. While you are in bed you should do circulation exercises regularly to prevent the blood flow from becoming sluggish. The physiotherapist will show you what to do. If you develop a significant clot in the leg or lungs you will receive anti-coagulant therapy. It is possible for a thrombosis or embolism to occur when you have left hospital and you should know what to look for.

If you develop any of the following signs and symptoms you should contact your own general practitioner immediately.

- Sudden onset of severe pain at the back of your leg, below the knee
- Sudden increase in swelling in your calf
- The skin on your leg becoming red and shiny.
- Sudden onset of unusual breathlessness.

- **Risks of general anaesthetic:** there are risks of all forms of anaesthesia and these tend to depend on your level of general health and degree of other medical problems. Efforts are made to minimize risks but you should discuss this aspect with your surgeon and anaesthetist so that you are aware of the risks.

- **Bleeding:** after the operation bleeding under the skin may make the wound tense and painful. Sometimes this blood clot can ooze out between the stitches causing a delay in wound healing. Your rehabilitation may be slowed down during this time.

- **Death:** It has to be acknowledged that a tiny percentage of patients die during or after the operation. Death can be caused by a serious blood clot in the lungs, but in most elderly patients it is due to medical complications unrelated to the knee replacement.

- **Other Risks:** There may be other additional risks, which should be discussed with your Surgeon.

USEFUL TELEPHONE NUMBERS

tel No

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