TOTAL KNEE RESURFACING

INFORMATION AND PROTOCOLS

PREAMBLE

Over the last 10 years advances in surgical technique and joint design have meant that knee joint replacement has become a reliable and rewarding procedure, relieving pain and in many cases improving range of movement of a diseased joint with great success.

What follows is some information and data on the particular joint or replacement you may receive as well as some information concerning the operation, rehabilitation and recovery.

HISTORY

Arthritis of the knee joint has caused many problems for surgeons since the beginning of orthopaedics. It has been difficult to treat successfully and until relatively recently knee surgery was regarded as a fairly risky undertaking with often quite poor or disappointing results.

Some years ago it was common practice to remove the knee joint entirely and substitute a simple metal hinge inside the bone to allow the patient to bend the knee. This often resulted in failure and unfortunately gave knee surgery a poor reputation and standing amongst the general public.

Radical redesign of the materials and joint inserted into the knee however has improved beyond all recognition the results from this operation and now 95% of people undergoing knee joint replacement may expect good to excellent results if the operation is performed by a specialist knee surgeon.

KNEE JOINT DESIGN

The more recent designs of knee joint concentrate on replacing the worn bearing surface of the knee and to keep all the other natural components of the joint such as the surrounding ligaments, soft tissues and knee cap.

This allows minimal removal of the patient's own tissues and just resurfaces the areas that are worn; as a result the knee is felt to move more naturally and results of these more modern prostheses are most satisfactory.

FEMUR

The femur is shaped to resemble the real bearing surface of the end of the thigh bone and is a complex design made of a type of stainless steel which is tolerated by the body's own natural tissues. The tibia is resurfaced by a platform of metal on the top of which is situated a bearing surface made of plastic. This in many ways resembles the cartilages that are naturally in a normal knee joint.

The plastic is made of a specially designed high density polyethylene and allows the bearing surface of the femur to move upon it.

PRE-ASSESSMENT

You will be called to the hospital prior to your operation for assessment of your physical health.

This ensures that you are fit and medically well to undergo surgery and there will be no problems with the administration of anaesthetic or other treatments.

Samples of blood and urine are taken and the heart and lungs are assessed and checked to ensure all is well.

THE OPERATION

On the day of operation you will be seen by myself and my anaesthetist prior to surgery.

The operation to resurface the knee may normally take one and a half hours, although more time may be required if the operation is difficult or complex.

Following surgery, you will be returned to the ward and will note that there will be a dressing on the knee consisting of an elasticated bandage.

There will be some discomfort after the operation and painkilling drugs are given during the procedure.

If you do have discomfort, however, please alert a member of the nursing staff as all patients are prescribed painkilling drugs which should be used to reduce discomfort.

Pain control is vital to ensure you are able to co-operate with physiotherapy over the few days of your hospital stay.

On the day of surgery the physiotherapist will encourage you to move the knee and fully weight bear.

MYRECOVERY APP

You will shortly be coming into hospital for your planned knee surgery.

We have developed an individualised app, which is complimentary, aimed at guiding you through the surgical process and helping you through your recovery, instructing you in exercises daily and recording your progress.

The app is free to download and you can access this by scanning the QR-code on the enclosed leaflet or going directly to <u>www.myrecovery.app/abri</u>.

I urge you to log on to this app in advance of your surgery so you can benefit from the full support as you go through the process.

The app contains a series of information modules which will help you understand your surgery and the postoperative rehabilitation. It also contains physiotherapy exercises which are illustrated and ways you can record your progress through the recovery programme, monitor it, and see your progress and recovery in graphical form. Many patients have found this extremely useful as it is the daily reminder on your own telephone or mobile device to complete and log the exercises and, at the same time, receive guidance and input as to how you might feel and progress each part of your journey.

Therefore, do please go to the website or scan the code and download the myrecovery app which is relevant to you.

The major benefit is obtained by looking at this app the week before your surgery as it has a number of details which are helpful at the time of your admission to hospital.

RECOVERY

Day 1

On the morning following surgery blood samples will be taken to ensure all is well following the operation.

Occasionally patients may require a transfusion of blood following the operation. X-rays are taken to ensure that the knee prosthesis is correctly and accurately situated.

These can be shown to you during your hospital stay.

Day 2-3

During the subsequent stay on the ward the aim is to achieve full straightening of the knee, the ability to bend the knee to a right angle (90°) and to promote wound healing and reduction of swelling and discomfort.

The physiotherapist will visit regularly to encourage exercises to allow the knee to be moved more fully and to strengthen the muscles.

You may fully weight bear through the knee and initially the physiotherapist will supervise you in the use of crutches and walking exercises.

Movement out of bed is encouraged and progressively the physio will increase the bending angle of the knee during this period.

Initially mobilisation will take place on crutches with the supervision for trips around the room and for toilet visits, but subsequently these walks will become longer down the corridor and before discharge all patients will be confident and safe in ascending and descending stairs.

The physiotherapist will instruct and help you in achieving muscular co-ordination and strengthening of the knee during this period. Active participation is required for this and thus the pain and discomfort you may have must be controlled with painkillers to allow you to help the physiotherapist get the knee moving again.

Most people require sometimes 3 days to achieve a 90° bend with full extension of the knee, safe walking and good stair climbing.

Patients are discharged home providing the physiotherapist and nursing staff are happy that all arrangements have been made for the safe and secure return to your own place of residence.

REHABILITATION

Recovery from knee surgery is said to be a little more difficult and slightly more prolonged than that following other major joint replacements.

This is thought to be because the knee movements are much more complex than those of the hip.

Initially, the knee will be a little stiff and I would encourage you to actively bend and straighten the knee gradually increasing your activity and walking distance in the first few weeks following surgery.

The physiotherapist will continue their treatment in out patients and will be offering further advice and exercises to allow you to improve the function of the joint. These physiotherapy visits will be arranged prior to your discharge from hospital if subsequent physiotherapy is required.

A follow-up appointment with me will take place approximately 6 weeks following surgery and by this time most patients are feeling a little more confident and have improved their walking distance and stability. Rates of individual progress vary however, and depending on the extent of the original arthritis some patients will proceed faster than others.

If all is well at the 6 week appointment, I then normally see patients in approximately 6 months to ensure that a full range of movement has been achieved, that the knee is working well and normal walking has been recovered with or without a stick for stability.

Further improvement is known to occur up to a year following joint replacement.

RESULTS

Results from the more modern type of knee resurfacing are available over the last 12 to 15 years.

They indicate as previously stated that about 95% of people experience good or excellent relief from pain and improvement of function and the knee joint itself apparently has a reliable life of between 15 to 20 years.

After this period, as with all things mechanical, the plastic insert between the two metal surfaces of the prosthesis begins to wear down and the discomfort of the original arthritis may be experienced by the patient.

At this point it may be necessary to revise the knee, that is remove the worn replacement and substitute a new knee prosthesis in its place.

This procedure carried out by a knee specialist is now well recognised and will provide a further relief of pain for another 15 years if required.

COMPLICATIONS

As with any demanding or major joint surgery, there may be complications which hopefully are of a minor nature.

Some patients occasionally suffer problems with wound healing and the scar on the front of the knee which is approximately 8"/22cm long sometimes takes a little time to heal and will exhibit some bruising.

Sometimes patients suffer some problems in achieving bending of the knee and this often is related to the severity of the arthritis before surgery.

Every assistance and help will be given by the physiotherapist to achieve full function of the knee.

The most serious complication is that of infection.

The knee prosthesis is an artificial insert into the human body and therefore it is possible for bacteria that may arise in the bloodstream to infect the joint. This causes pain within the knee replacement and in the most serious cases requires the removal of the knee prosthesic with its subsequent replacement a few weeks.

the removal of the knee prosthesis with its subsequent replacement a few weeks later.

This serious complication occurs in less than 1% of patients in my practice and is minimised by the use of antibiotics during the implantation procedure and the use of antibiotics subsequently if it is apparent there is any infection in the foot or knee. Any extensive dental procedures that may require intra-oral surgery should be covered by antibiotics also and your dentist should be made aware of the fact that you have a joint replacement.

Deep venous thrombosis (DVT) or the forming of clots in the veins of the leg is a recognised complication. To avoid DVT, patients' blood is thinned during surgery and for a short period afterwards. Intermittent compression pumps on the feet maximise the circulation post-surgery in the first few days and patients also wear compression stockings for the first few weeks post-operatively.

HELP AND ADVICE

Should you have any questions regarding knee surgery or be concerned regards pain or swelling in the post operative period please feel free to contact the person on any of the numbers listed below:

King Edward VII Hospital	
Nursing Station, Ward 2	02074874202
Nursing Station, Ward 3	02074874203
Desmond Rumgangom Orthopaedic Specialist Practitioner	07778470118

OPERATION SITE CARE

An incision following surgery heals through several phases. The rate and speed of healing depends on many factors including the health of the patient and many variables that differ between patients as well as environmental factors and the extent of surgery.

Your incision will be healed within two weeks from surgery unless there has been some reason to delay healing. Additionally some patients have other medical problems such as diabetes or medication such as steroids that may cause additional time for their incision to completely heal. Patients who are significantly overweight or smoke may also find the rate the incision heals is slowed in these cases. A healthy balanced diet is important in healing of the incision. If you have questions about the time it will take for your incision to heal discuss this with your surgical team (see contact information).

Most surgical incisions will heal without problem. However, wound infection (this means that germs have started to grow in the wound) is a serious complication following knee surgery, so patients are given antibiotics by vein at the time of surgery - which reduces the risk to less than one percent. Following this, two further doses of antibiotics are necessary. Patients are responsible for the care of their incision and prevention of infection. Good personal hygiene and proper wound care are of utmost importance.

Professor Barrett and his surgical team will do everything to reduce chances of your incision becoming infected whilst you are in hospital. They will alert you to any concerns you have about your incision and specific instruction regarding your incision and care.

HOW DO I TAKE CARE OF MY OPERATION SITE AT HOME?

Professor Barrett uses an extremely modern technique of wound closure, with clips or staples and without visible sutures.

Skin closure is achieved by a suture running below skin level which will dissolve with the passage of time.

This technique gives a pleasing cosmetic appearance but also reduces the chance of infection.

SURGICAL DRESSINGS

Surgical dressings are used to prevent bacteria which exist on our skin and in the atmosphere and in all of our homes, from being able to settle on the incision site and grow in the vulnerable tissues.

The dressings are very important to ensure that this growth in the incision does not occur and patients may play their part by not tampering with the dressings until the incision is fully healed and they have been told either by the district nurse or ward staff that it is safe to change their own dressings.

It can be very tempting to take a little look at your surgical incision site following surgery but this increases the chances of developing an infection and should be avoided at all costs.

The purpose of the dressing is to:

- absorb any leakage from the wound
- provide ideal conditions for healing
- protect the area until the incision is healed

Changing the dressing

The original dressing can be left in place for two days following discharge from the hospital. The dressing should be dry and not soaked with blood or any other liquid. After the initial ten day period you may remove the dressing. The original dressing is waterproof to allow showering but not submersion in a bath.

Before you remove the dressing, <u>you must wash your hands</u> with gentle soap and warm water and then carefully take the dressing off. <u>Don't touch the healing</u> <u>incision with your fingers</u>.

The healing incision can then be covered with a fresh dressing. Most people like to continue wearing a dressing over the area for protection, especially if clothing is going to rub against it.

The hospital will supply a replacement dressing for you to use at home. Apply the dressing carefully and <u>don't touch the inside of the dressing</u>. There is no need to use antiseptic cream under the dressing.

When can i take a shower?

In most cases this can be on discharge from hospital, provided the waterproof dressing is intact. Normally prolonged bath, bathing or soaking in water is discouraged to avoid soaking the operation site in bath water.

If the dressing is disturbed before 10 days have elapsed you may bathe the leg using a clean flannel with warm water and gentle soap morning and evening, avoiding the dressing which remains in place. The limb should be gently dried by patting with a clean towel to absorb moisture.

After ten days have passed, the dressing may be removed in total. In addition to the white gauze, there is a plastic film over the wound which can be removed gently.

Some general points to note are outlined below:

- Showering is preferable to bathing.
- **DO NOT REMOVE** any dressing before having a bath or shower. The dressing provided to you will be a waterproof dressing therefore can be left in place.
- Don't use any harsh soap, shower gel, body lotion, talcum powder or other bathing products directly over the healing wound.
- It is permissible to allow the shower water to gently splash onto the dressing/healing incision. However don't rub the area, as this will cause pain and might delay the healing process.
- Only have a bath if the healing incision can be kept out of the water. Don't soak the area as this might soften the scar tissue and re-open the wound.
- Dry the healing area carefully by patting it gently with a clean towel.

IF YOU HAVE CONCERNS ABOUT YOUR INCISION SITE

It is important that you know how to tell if you are developing an infection after you go home. If an incision becomes infected, it may:

- become more painful
- look red, inflamed or swollen
- leak or weep liquid, pus or blood
- smell unpleasant

If you are concerned about your incision or if you develop a high temperature, or notice any of the signs listed above, you should contact the hospital. Infections can be treated successfully if they are diagnosed early.