# Knee Replacement Guide



NATIONAL
ORTHOPAEDIC
HOSPITAL
CAPPAGH

## Contents


- Introduction
- A Healthy Knee
- A Problem Knee
- A Knee Replacement
- Assessment
- Clothing and Footwear
- The Operation
- Advantages, Risks and Complications
- The Team and You
- Nursing
- Physiotherapy
- Exercises Post-surgery
- Occupational Therapy
- Social Worker
- Going Home
- Sexual Activity
- Checklist for Surgery
- Contact Details

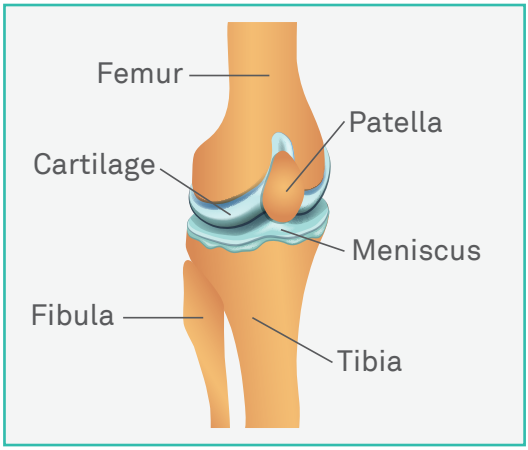

# Introduction

Welcome to the National Orthopaedic Hospital Cappagh, Ireland's major centre for Elective Orthopaedic Surgery.

This booklet has been written to give you and your family a basic understanding of a knee replacement, including what happens during surgery, what your Surgeon hopes to achieve and what to expect after your operation.

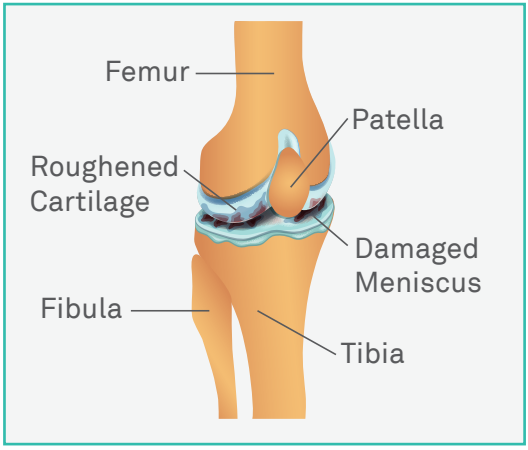
Keep this booklet in a safe place as you should refer to it often during your recovery. If there is anything that you do not understand, please ask your Nurse, Surgeon, Physiotherapist or Occupational Therapist.

## A Healthy Knee




The knee joint is formed by the end of the thigh bone (femur) and the top of the shin bone (tibia). In a normal knee joint the ends of these bones are coated with articular cartilage which provides a smooth surface for the bone ends to glide against each other. The kneecap (patella) is the moveable bone at the front of the knee. It is wrapped inside a tendon that connects the thigh muscles (quadriceps) to the tibia. The back of the patella is also coated with articular cartilage to allow it to glide within a groove at the front of the knee. Stability is provided by strong ligaments on either side and within the knee joint. Powerful muscles around the joint allow movement. When the muscles and ligaments support your weight and the joint moves smoothly, you can walk without pain in your knee.

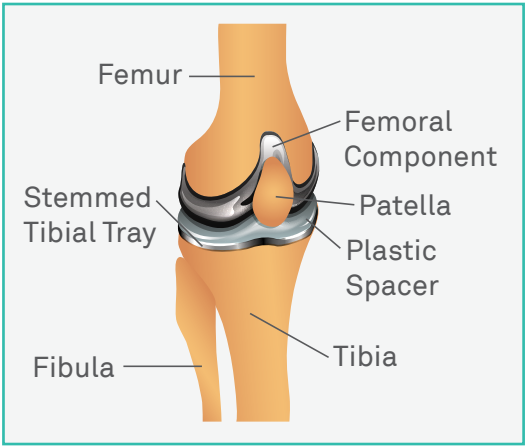
## A Problem Knee

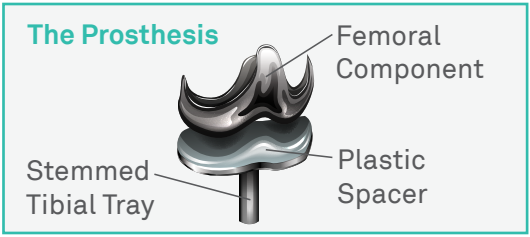



Arthritis causes the articular cartilage to wear away, exposing the underlying bone and leading to roughening and distortion of the joint. This leads to painful and restricted movement. Often a limp develops and the knee may swell and/or give way. Muscles around the knee waste and the leg can bow in or outwards or become shortened.

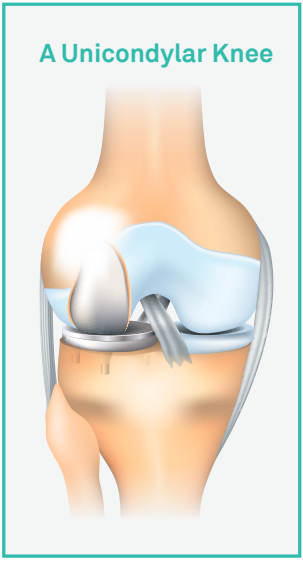
# A Knee Replacement

A knee replacement is an operation designed to replace (or partially replace) a knee joint that has been damaged, usually by arthritis. The main reason for replacing any arthritic joint is to stop the exposed bone ends rubbing together causing pain. Replacing the painful arthritic joint with an artificial joint or prosthesis, gives the joint new surfaces that move smoothly and without causing pain. The goal is to help you return to normal activities without pain.




Sometimes only part of the knee is damaged and a unicondylar knee prosthesis is used. It only replaces the worn surfaces on one side of the knee joint. It is less extensive which means recovery is faster.



## Assessment

During the Pre-Operative Assessment clinic you will be assessed by the team. You will meet an Anaesthetist, Specialist Nurse and a Physiotherapist and the assessment will include having blood tests, x-rays and a full nursing and medical examination. Any anxieties you may have regarding your operation can hopefully be alleviated at this stage.

If you have a weight problem you should consult your General Practitioner with a view to losing some weight before surgery.

If everything regarding your health is satisfactory, you will be called back for your knee replacement within a few weeks from the time of the assessment.

## Clothing and Footwear

You are encouraged to dress in your every-day clothes as soon as possible after your operation. Loose, comfortable clothing is advised as we need to be able to access your knee for treatment purposes. Shorts and loose skirts are ideal. Please ensure that trousers and tracksuit bottoms can be pulled up above the knee.

We recommend comfortable lace-up or slip-on shoes with low heels. Trainers or runners are ideal but not necessary. We do not recommend old slippers or backless shoes.

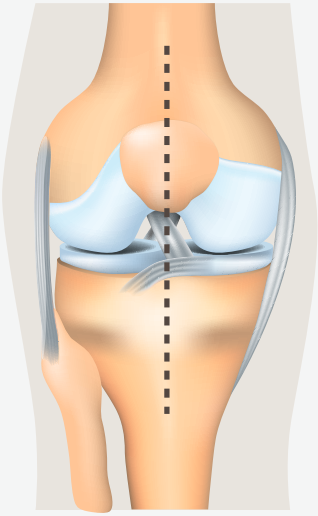
Remember that the operated leg may be swollen after your surgery so avoid tight clothing or shoes.

# The Operation

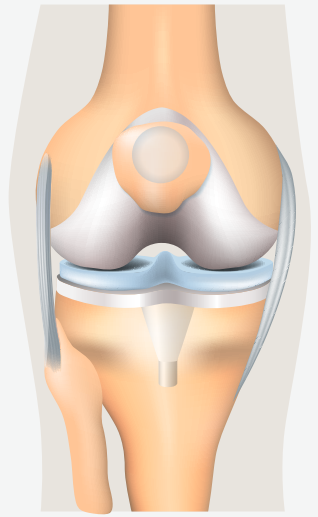
The operation is usually carried out under spinal/epidural anaesthesia. An incision is made across the front of the knee from above the knee joint to below it.

A metal “shoe” is placed over the end of the thigh bone. A metal stem is placed into the top of the shin bone and this is covered with a shaped plastic (polyethylene) surface. A plastic button is sometimes attached to the back of the knee cap. These parts glide together to form the artificial knee joint. The components are usually cemented into place although some are uncemented. All parts have smooth surfaces for comfortable movement once you have healed.

Post operatively you will have large padding around the joint. When this is removed you will be left with a small dressing over the scar. You will be encouraged to move your feet regularly and carry out exercises to maintain circulation. You will be fitted with elastic stockings to minimise the risk of blood clots. Within 24 hours you will begin moving your knee and walking with the Physiotherapist. This can happen on the same day as your surgery.



Site of incision



Components in place

# Advantages, Risks and Complications

As with any surgery, there are advantages, risks and complications which can occur.

## Advantages

- Pain relief
- Improvement in mobility
- Improvement in quality of life

The majority of joint replacement surgeries are complication free, however the risks vary depending on your age and overall health. Your Consultant will discuss success rates and complications with you.

## Risks and complications

The risks and potential medical complications include, but are not limited to:

- Problems with anaesthesia
- Heart attack / Stroke / Death
- Bleeding which may require a blood transfusion
- Blood clots
- Delayed wound healing
- Infection
- Other medical complications
- On-going pain and reduced mobility
- Pressure sores
- Bone fractures in surgery
- Paralysis, local nerve damage, numbness / weakness
- Device loosening or breakage of the implant
- Bone loss

# Actions to reduce risks and complications

**You and your health care team can take several actions before and after surgery to reduce the risks of complications.**

**It is important to be in the best possible overall health and there are a number of things you can do to prepare yourself for surgery, recovery and rehabilitation.**

## 1. Diet

In the weeks before your surgery it is advisable to eat a balanced diet as this can help the healing process. If you need to lose weight it may be advisable to see a Dietician who will instruct you on how best to achieve this. You can talk to your Consultant/GP about a referral. See our booklet- "Bone, Muscle & Joint Health Nutrition and Orthopaedic Surgery"

## 2. Smoking

If you smoke, stop as far in advance of surgery as possible. Smoking may cause complications with the anaesthetic. Nicotine can delay or interfere with healing and bone growth. Surgery may be a perfect time to stop smoking altogether.

## 3. Blood clots

To reduce the risk of developing a blood clot in the legs or lungs:
Do not become dehydrated
- You will be advised when to have your last meal before surgery. You can drink some clear fluid (water) up until 6.00 am of the morning of surgery. We encourage you to resume fluids and a light diet soon after your surgery.

You will be assisted to mobilise on the day of your surgery if you are well enough. You will be advised to take frequent walks during your recovery.

You will be educated on leg and breathing exercises by a member of the Therapy team or Nursing teams.

Foot pumps are applied by nursing staff to help with circulation after surgery. You may have to wear compression stockings for up to 6 weeks after your surgery.

Medications can be used to thin the blood as indicated by your surgeon.

continued >

# Actions to reduce risks and complications

## 4. Infection

National Orthopaedic Hospital Cappagh maintains the highest standard in relation to infection prevention and control.

Please contact Same Day Admission Unit (01) 8140323, if you have any signs or symptoms of infection such as chest or urinary infection in the days prior to your surgery. Inform us if you have a rash, flare up of psoriasis, or eczema around your hip area, any cuts/lacerations or a leg ulcer.

If you have a history of MRSA, VRE or CPE or have been in contact with someone with MRSA, VRE or CPE please let us know as soon as possible. If family or friends have vomiting, diarrhoea, cold, or flu or other infections please ask them not to visit you in the days preceding or immediately after your surgery.

The best way to prevent infection is by good hygiene and hand washing. Remember to clean your hands immediately before eating and after using the toilet. Please avoid touching your wound.

# The Team and You

On your journey from the pre-assessment clinic (PAC) to your surgery and discharge home, you will meet the members of our multidisciplinary team.

We aim to advise you before your surgery and assist you with your recovery following your surgery in preparation for your discharge home.

It is important to remember that this surgery is for your benefit. As a hospital we will endeavour to provide the best care we can offer. It is vital you engage and organise yourself before surgery to ensure your journey is as smooth as possible.



# Nursing

Specialist Orthopaedic Nursing is provided provided on a 24-hour basis from admission through to discharge.

Your nursing requirements will be assessed and specific nursing care will be implemented which will meet your needs, before, during and after surgery.

Before, during and after surgery we will closely monitor your pain level and provide prescribed pain relief that will make your post-operative recovery as comfortable and pain free as possible. This will aid your physiotherapy and mobility process. It is important that you inform your nurse or therapist/doctor of any pain you are experiencing.

We will monitor your recovery and your progress and communicate with the various other professionals involved in your care. This will ensure that your discharge home will be as smooth as possible.

# Physiotherapy

You will be seen by a Physiotherapist either in the Pre-Operative Assessment Clinic or when you are admitted. Your Physiotherapist will help you with an exercise programme:

- To control the swelling in your knee;
- To regain movement in your knee – we aim for a straight knee and at least 90 degrees of knee bend, although most people gain more;
- To strengthen the leg muscles in order to support your new knee;
- To walk with an appropriate walking aid initially and then independently;
- To manage stairs if necessary.

# Exercises Post-surgery

1. **Deep breathing:** These should be done regularly to prevent chest infection.
2. **Ankle pump exercises:** Move feet up and down at the ankles. These should be done regularly to prevent risk of blood clot in the legs.
3. Squeeze your bottom muscles together. Hold for 3 seconds, relax, repeat 10-20 times.
4. Press the knee flat onto the bed by tightening the muscles on the front of the thigh. Hold for 3 seconds, relax, repeat 10-20 times.



5. Lying on your back put a cushion under your knee. Tighten your thigh muscle and straighten the knee (keep knee on the cushion). Hold for 5 secounds and slowly relax. Repeat 10-20 times.



6. Lying on your back with the operated leg straight and the other leg bent. Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20cm off the bed. Hold approx 5 secounds - slowly relax.



7. Sit on a chair with your feet on the floor. Bend your knee as much as possible.



continued >

8. Sit on a chair. Pull your toes up, tighten your thigh muscle and straighten your knee. Hold 5 - 10 secounds, and slowly relax your leg. Repeat 20 times.



9. Sitting on a chair, with the leg to be exercised supported on a stool, let your leg straighten in this position. Hold for 20 seconds.



**Remember to keep the unoperated leg moving to prevent it from stiffening up.**

## Occupational Therapy

Occupational therapy involves teaching you to be as independent as possible within the limitation of your surgery.

If required you will be referred to Occupational Therapy at the Pre-Operative Assessment Clinic.

Following surgery you will only be seen by the Occupational Therapist if deemed necessary by the multidisciplinary team. If required, individual assessment will be completed by your Occupational Therapist and your functional abilities will be assessed. Referral for community occupational therapy will be made if required. Advice will be given regarding managing at home with your new knee.

## Social Worker

The Social Worker in the hospital provides the following confidential services:

- Advice and support for anyone whose social/emotional problems may be of concern to themselves or their families in relation to their admission for orthopaedic surgery.
- Assessment and advice for patients and their families in relation to hospitalisation and discharge.
- Information on Social Welfare and Health benefits and entitlements.

## Going Home

Most people go home 1or 2 days after surgery using one stick to support their new knee, when they can walk without help and manage steps. You should be able to walk without a limp before you discard your stick. If you experience any of the following symptoms you should contact your surgeon:

- Inability to walk due to pain
- Persistent hot and swollen knee
- Oozing from the wound
- Unusual shortness of breath
- Chest pain
- Calf pain

You can gradually increase your level of activity and should continue your exercise programme until you are reviewed by your surgeon. You will continue to improve for several months.

## Sexual Activity

You may generally resume sex when you feel physically and mentally ready. Time should be allowed for the incision to heal and for the muscles and ligaments to begin the healing process.

It is common after most surgery to have a low desire for sex, especially if there is a lot of discomfort with pain and stiffness. Communication with your partner about practical positions as well as feelings is important. Sharing non-sexual acts of intimacy can also be important. If the side effects of your medication are having negative effects on sexual performance, ask your doctor can it be changed.

**Please ask your therapist or nurse for further information and advice.**

## Checklist for Surgery

**Family member/ friend identified to assist with:**

- Meal preparation
- Shopping
- Cleaning
- Compression stockings (TEDs)
- Foot hygiene

**What to bring:**

- Non-slip flat shoes with a back (runners, slip on shoes)
- Loose fitting everyday clothing (This allows you get dressed and exercise)
- Long handled aids that you already own

## Contact Details

**Admissions Department**
**01 814 0501**

**Main Reception**
**01 814 0400**

**Medical Social Work Department**
**01 804 1423**

**Occupational Therapy Department**
**01 814 0429**

**Physiotherapy Department**
**01 814 0462**

**Pre-Assessment Clinic**
**01 814 0407**



NATIONAL
ORTHOPAEDIC
HOSPITAL
CAPPAGH

Cappagh Road, Finglas, Dublin 11, D11 EV29
T: **01 814 0400** E: **info@nohc.ie** **www.nohc.ie**

Produced by the
**Physiotherapy Department**

Doc. No: IM-NOHC-20 Revision: 5 Revised every 2 years Issued: 19.01.2022

This document is controlled as per the hospital Document Control Procedure and as such is subject to change at any time - Please refer to **www.nohc.ie** for the latest version of this document.