

**A guide to your total
knee replacement
(*knee arthroplasty*)
and rehabilitation following
your operation**

Information for patients

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This leaflet has been produced to give you information about knee replacement surgery and rehabilitation following your operation. Rehabilitation is improving the movement in your knee and the strengthening of your leg muscles. We hope it will be helpful to you, however it is not meant to be a complete guide and may not include all the risks and benefits. If you have any questions or you require further explanations please do not hesitate to ask a member of staff who is caring for you.

What is the procedure?

The knee is an important hinge joint and as it is weight-bearing can be prone to “wearing out”. Arthritis is painful and disabling and you and your surgeon may have decided that a knee replacement may be your best option.

A knee replacement is a surgical procedure, in which the injured or damaged surfaces of the knee are replaced with artificial parts which are secured to the bone.

If you have any X-rays of your own please remember to bring them with you to the hospital.

You will be seen by the surgeon before the operation. They will take this opportunity to draw (mark with a pen) on your leg. This is to make sure the correct leg is operated on. If you have any questions, this might be a good time to ask them.

An anaesthetic will be administered in theatre. This may be a general anaesthetic (where you will be asleep - please see you and your anaesthetic leaflet) or a local block (e.g. where you are awake but the area to be operated is completely numbed). You must discuss this with the anaesthetist.

A tight inflatable band (a tourniquet) may be placed across the top of the thigh to limit the bleeding. Your skin will be cleaned with anti-septic solution and covered with clean towels (drapes). The surgeon will

make an incision (a cut) down the middle of the knee. The knee capsule (the tough, gristle-like tissue around the knee) which is then visible can be cut and the knee cap (patella) pushed to one side.

From here, the surgeon can trim the ends of the thigh bone (femur) and leg bone (tibia) using a special bone saw. Some surgeons also remove the underside of the knee cap.

Using measuring devices, the new artificial knee joints are fitted into position. The implants have an outer alloy metal casing with a “polyethylene” bearing which sits on the tibia. A polyethylene button is sometimes placed on the underside of the knee cap.

When the surgeon is happy with the position and movements of the knee, the tissue and skin can be closed. This may be done with stitches (sutures) or metal clips (skin staples). The clips and stitches will need to be removed around 10 days after the operation.

Drains may be used, and if so can be pulled out easily on the ward in a day or two.

When you wake up, you will have a padded bandage around the knee. If you are in pain, please ask for pain killers. If you have pain, it is important that you tell somebody.

You will go for an X-ray the day after the operation and will be encouraged to stand and take a few steps.

You will be visited by the physiotherapy team, who will suggest exercises for you. It is important to do these (as pain allows).

*****please be aware that a surgeon other than your consultant but with adequate training or supervision may perform the operation*****

What are the alternative procedures?

Knee replacements are usually performed on patients suffering from severe arthritis (although there are other reasons).

Other alternatives include:

- losing weight,
- stopping strenuous exercises or work,
- physiotherapy and gentle exercises,
- medicines, such as anti-inflammatory drugs (e.g ibuprofen or steroid),
- using a stick or a crutch,
- arthroscopy
- using a knee brace,
- cartilage transplant,
- knee fusion (arthrodesis)

Some of the above are not appropriate if you want to regain as much physical activity as possible, but you should discuss all possibilities with your surgeon.

What are the risks?

As with all procedures, this carries some risks and complications and the following list is a general guide for common, less common and rare complicated.

General Risks: such as heart attacks, strokes or chest infection.

Common (2 to 5%)*

Pain:the knee will be sore after the operation. If you are in pain, it's important to tell staff so that medicines can be given. Pain will improve with time. Rarely, pain will be a chronic problem & may be due to any of the other complications listed below, or, for no obvious reason. Rarely, some replaced knees can remain painful.

Bleeding: A blood transfusion or iron tablets may occasionally be required. Rarely, the bleeding may form a blood clot or large bruise within the knee which may become painful and require an operation to remove it.

DVT: (deep vein thrombosis) is a blood clot in a vein. The risks of developing a DVT are greater after any surgery (and especially bone surgery). DVT can pass in the blood stream and be deposited in the lungs (a pulmonary embolism – PE). This is a very serious condition which affects your breathing. Your surgeon may give you medication (either an injection or tablets) to try and limit the risk of DVTs from forming. Some centres will also ask you to wear stockings on your legs, while others may use foot pumps to keep blood circulating around the leg. Starting to walk and moving early is one of the best ways to prevent blood clots from forming. The 2 to 5%* risk relates to clots producing significant symptoms.

Knee stiffness: may occur after the operation, especially if the knee is stiff before the surgery. Manipulation of the joint (under general anaesthetic) may be necessary. Very rarely stiffness is permanent.

Prosthesis wear or loosening: With modern operating techniques and new implants, knee replacements last many years. In some cases, they fail earlier. The reason is often unknown. The plastic bearing is the most commonly worn away part. Very rarely the implant may break

Less common (1 to 2%)*

Infection: You will be given antibiotics at the time of the operation and the procedure will also be performed in sterile conditions (theatre) with sterile equipment. Despite this infections still occur. The wound site may become red, hot and painful. There may also be a discharge of fluid or pus. This is usually treated with antibiotics and an operation to washout the joint may be necessary. In rare cases, the prostheses may be removed and replaced at a later date. The infection can sometimes lead to sepsis (blood infection) and strong antibiotics are required. Very rarely if the infection can not be controlled stiffening the knee (arthrodesis) or amputation becomes necessary.

Rare (less than 1%)*

PE: a Pulmonary embolism is the spread of a blood clot to the lungs and can affect your breathing. This can be fatal.

Altered leg length:the leg which has been operated upon, may appear shorter or longer than the other.

Altered wound healing:the wound may become red, thickened and painful (keloid scar) especially in Afro-Caribbeans.

Joint dislocation:if this occurs, the joint can usually be put back into place without the need for surgery. Sometimes this is not possible, and an operation is required, followed by application of a knee brace

Nerve Damage:efforts are made to prevent this, however damage to the small nerves of the knee is a risk. This may cause temporary or permanent altered sensation around the knee. There may also be damage to the Peroneal Nerve, this may cause temporary or permanent weakness or altered sensation of the lower leg. Changed sensation to the outer half of the knee is common. Nerve injury can occur from surgery or tourniquet (tight cuff used in the operation).

Bone Damage:bone may be broken when the prosthesis (false joint) is inserted. This may require fixation, either at time or at a later operation.

Blood vessel damage:the vessels at the back of the knee may rarely be damaged and may require further surgery. Blood vessel injury and circulation problems can be caused by surgery or tourniquet.

Death:this very rare complication may occur after any major surgery and from any of the above.

Before your operation (pre-operative care)

Before you can be added to the waiting list for your operation you will be asked to attend the pre-operative assessment clinic to ensure that you are fit to go ahead with the surgery. You will usually be asked to attend straight from your out-patient appointment, but in some cases, may be given an appointment to return.

This assessment will involve completing a health questionnaire and seeing a nurse who will go through your past medical history and request or carry out any investigations required such as blood tests, ECG, urine tests and x-ray. The nurse will discuss your planned surgery with you and you will have the opportunity to ask questions regarding your operation.

An appointment will be made for you nearer the time of your operation to attend an education session led by a physiotherapist (a therapist who gets you back to walking and moving your new joint) and occupational therapist (a therapist who helps you to manage your daily living activities) who will talk to you about what will happen during your hospital stay and after discharge.

What happens when I am admitted?

On admission to the ward you will be shown to your bed, the layout and routine of the ward and you will be given an identity wrist band.

Once you have settled in, your temperature, breathing and blood pressure will be noted and the doctor will visit you. You will be seen by an anaesthetist who may give you medication to help you relax before to your operation.

You cannot eat for 6 hours prior to your surgery but you will be allowed a drink of water. This means no food after 12 midnight the previous evening for morning surgery or after a light breakfast for afternoon surgery.

Before your operation you will be asked to take a bath or shower, and to change into a theatre gown. You will be asked to wear surgical stockings to prevent clots.

After your operation (post-operative care)

1 When you are back on the ward you may find you have:

- a mask supplying oxygen.
- a narrow tube into one of your veins to replace lost fluids and for the taking of blood (this is usually in the back of the hand).
- a drain from your wound into a bottle / bag.

2 The nurse will regularly check:

- your pulse and blood pressure
- wound site
- wound drainage into a bottle or bag
- position of your legs - you may have a pillow between your legs.

3 You will be encouraged to mobilise on the day of your operation, with assistance approximately 2 hours after surgery.

4. Pain killing injections or tablets will be given when you require them.

5 You will be able to drink and eat when you are fully recovered from the anaesthetic.

6 You will be encouraged to rest and sleep following surgery as this helps you to recover.

You will be seen by the physiotheapist who will get you doing exercises to bend your knee and to strengthen the muscles. It is also important to do these regularly to help your recovery.

Knee Exercises

Your new knee is able to take all your weight straight away after the operation. However your muscles need to work well enough to do this. Exercises have a very important part to play in your recovery.

It is important because the exercises you are shown will:

- 1 strengthen the muscles that support your knee
- 2 increases the movement of your knee
- 3 improve your walking.

You should try to do your exercises twice a day. For each one do a set on one leg and then swap and do the other leg.



Supported sitting on a bed with legs straight. Bend your ankles and push your knees down firmly against the bed.

Hold for 5 seconds - relax.

Repeat 10 times.



Supported sitting on a bed.

Bend one leg and put your foot on the bed and put a cushion under the other knee.

Exercise your straight leg by pulling your foot down and toes up, tightening your thigh muscle and straightening the knee (keep knee on the cushion). Hold approximately 5 seconds and slowly relax.

Repeat 10 times.



Lying on your back or sitting up with your operated leg straight and the other leg bent.

(You can vary the exercise by having your foot pointing either upwards, inwards or outwards). Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20cm off the bed. Hold for approximately 5 seconds



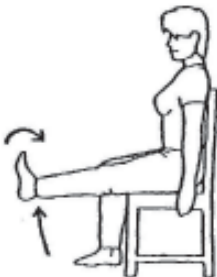
Lying on your back or sitting up with a sliding board under your operated leg and your heel resting on a towel.

Bend and straighten your hip and knee by sliding your foot (and towel) up and down the board. Repeat 20 times.



Sitting.

Bend your knee as much as possible.



Sit on a chair

Pull your toes up, tighten your thigh muscle and straighten your knee.

Hold approximately 5 seconds and slowly relax your leg.

Repeat 10 times



Sitting on a chair, with the leg to be exercised, supported as shown.

Let your leg straighten in this position and rest for 10 minutes

After the operation your recovery is very much up to you. We will support you, but you need to work hard to build up your muscles and get your knee moving. Your knee will not improve without effort.

If any difficulties with managing at home are found, an occupational therapist may visit you on the ward.

If your knee is swollen you can use ice to help reduce the swelling:

take a large packet of frozen peas and give the packet a knock to loosen them. Place a damp tea-towel on the skin, then place the packet of peas over the top. Leave the ice pack on for 10 minutes and repeat regularly – up to every 2 hours.

It is important if you have an open wound, you should not use ice treatment.

Please note: packets of peas which have been partially thawed for this purpose must not be consumed

After you go home

You will need to attend for out-patient physiotherapy. This is on a weekly basis for an average of 4 weeks with other patients who have had a total knee replacement. It is very important to continue your exercises regularly at home even after you have been discharged from physiotherapy. This will help ensure the best outcome from your knee replacement.

Commonly asked questions and answers:

If I have a joint replacement will the pain go?

Most patients find a large reduction in their symptoms after the operation and rehabilitation.

Is it normal that my knee and ankle will be swollen?

Yes, this gradually goes over time and using ice may help.

How long will I be in hospital?

Usually around 2–3 days.

How long do I have to wear the TED stockings for?

For six weeks after your operation.

When will my stitches / clips be removed?

Normally 10 – 14 days after your operation. This will be arranged by the nursing staff on the ward. It is important not to get your wound wet until your stitches/clips have been removed.

How soon before I can walk?

You will be assisted out of bed and be expected to be doing some exercise on the day of your operation.

How soon can I drive?

This is usually after 6 weeks, but you should discuss this with your consultant or physiotherapist. If an accident occurred when you could be considered unfit to drive, your car insurance would not be valid please check with your own insurance company.

How far can I walk?

This varies between patients, but generally as far as you feel able. It is better to do two short walks a day rather than one very long one and you can gradually increase the distance.

If you have any further questions or concerns please contact senior orthopaedic physiotherapist.

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Physiotherapy Department

Pinderfields Hospital: 01924 541450

Pontefract Hospital: 01977 747280

Dewsbury District Hospital: 01924 816115

Mid Yorkshire Hospitals switchboard: 0844 811 8110

Pontefract Hospital -

Friarwood Lane

Pontefract

WF8 1PL

Pre-operative admission clinic. Telephone: 01977 747008

Pinderfields Hospital

Aberford Road

Wakfield

WF1 4GD

Pre-operative admission clinic. Telephone: 01924 541251

Dewsbury and District Hospital

Halifax Road

Dewsbury

WF13 4HS

Pre-operative admission clinic. Telephone: 01924 512421

This picture shows a knee with arthritis



This picture shows the knee following total knee replacement



Ward Contact numbers

Pinderfields Hospital

31 Elective Orthopaedic ward 01924 542311

Dewsbury and District Hospital

Ward 12 01924 816014

* References

British Orthopaedic Association approved consent forms published on the internet at: www.orthoconsent.com

We are committed to providing high quality care. If you have a suggestion, comment, complaint or appreciation about the care you have received, or if you need this leaflet in another format please contact the Patient Advice and Liaison Service on:01924 543686 or email:pals@midyorks.nhs.uk

To contact any of our hospitals call:0844 811 8110
To book or change an appointment call:0844 822 0022

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