



# TOWNSVILLE

## LOWER LIMB CLINIC

Specialist Centre for Orthopaedic Surgery

## **TOTAL KNEE ARTHROPLASTY (knee replacement)**

### **The condition**

The knee is a hinge joint, formed by the end of the thighbone (femur) and the end of the shin bone (tibia). The bones are coated in cartilage, which acts as a cushion between the two bones and allows the knee to move. In front of these bones is the kneecap (patella) which glides in a groove on the end of the thigh bone.

### ***A knee joint***

Total knee replacements are usually performed for people who have arthritis that is getting worse and is no longer responding to other treatments. The most common type of arthritis is osteo-arthritis, which happens with aging or previous injury to the knee joint.

### **The operation**

Total Knee Replacement is the surgical removal of the diseased joint and replacing it with an artificial joint that is attached to the thighbone (femur) and the shinbone (tibia). This is known as a prosthesis.

### ***An artificial knee joint***

In most cases, bone cement is used to fix the artificial joint to the thigh and shinbone. Your surgeon will discuss with you the most suitable type of prosthesis for your condition and health. The operation takes 2 – 4 hours. At the time of surgery and for a short period after your surgery, you will be given antibiotics and a form of therapy ie injections or tablets, to thin your blood. Please tell your doctor at least one week before your surgery if you are taking Aspirin, anti - inflammatory drugs or blood thinning agents, e. g Warfarin.

### **Benefits of having the surgery**

The pain should gradually improve making it possible to take up activities, which could not have been done prior to surgery because of pain and stiffness in the knee joint.

### **Risks of not having the surgery**

The pain may become so severe that independence with every day activities such as showering, walking, shopping, gardening, climbing stairs, getting out of a chair, may be lost or difficult to do alone.

## TOTAL KNEE ARTHROPLASTY (knee replacement)

### Specific risks of this procedure

<b>The risk</b>	<b>Why it happens</b>	<b>What it causes</b>
<b>Clots in the Legs.</b>	untreated, this can happen in 1 in 5 people	The clots can break off and travel to the lungs in 1 in 100 people, and can cause death in 1 in 3,000 people.
<b>Wound Infection.</b>	Wound infection in 1 in 100 people;	Infection is a major complication and may require further surgery and possibly the new knee joint to be removed and possibly the leg amputated
<b>Dislocation of the knee joint.</b>	The knee joint/patella can dislocate because muscles and ligaments have not yet repaired themselves to provide support to the joint;	Re-operation is required.
<b>The bones around the joint may break.</b>	The bones around the joint may break during or after surgery. This can occur in 1 in 40 to 1 in 300 cases depending on bone strength.	A plaster may be required to repair the break or further surgery may be required.
<b>The kneecap may break.</b>	The knee cap may break in 1 in 650 people.	Further surgery may be required to repair the kneecap.
<b>The artificial joint will loosen or wear out.</b>	This can happen over a period, but 9 out of 10 knee joint replacements are still working after 10 years;	Surgical revision of the knee joint replacement may be required.
<b>Numbness by the cut.</b>	Numbness at the side of the cut can happen.	This may be temporary or permanent.
<b>Numbness/ paralysis of the foot.</b>	Damage to the peroneal nerve around the knee during surgery in 1 in 300 people.	This may be temporary or permanent. Further surgery may be necessary.
<b>Loss of blood supply to the leg.</b>	Damage to the blood vessel behind the knee in 1 in 300 to 1 in 500 people.	Surgery on the blood vessel, and sometimes leg amputation.
<b>Temperature disturbance to the operated leg.</b>	Damage to the nerves may cause a burning pain and inability to straighten the leg in 1 in 125 people.	A nerve block to relieve the pain and manipulation of the leg.
<b>Stiff knee joint.</b>	Stiffening of the knee causing difficulty in walking and sitting and pain on movement in 1 in 60 people.	Manipulation and possibly further surgery.
<b>Infection around the prosthesis years later.</b>	Infection can spread to the replaced joint via the bloodstream for years after replacement surgery (1 in 300 people)	The knee joint may have to be removed. To prevent this, you will need antibiotics before other procedures and dental work.
<b>Increased risks in obese patients.</b>		An increased risk of wound infection, chest infection, heart and lung complications, thrombosis.
<b>Increased risk in smokers.</b>	Smoking slows wound healing and affects the heart, lungs and circulation. Giving up smoking before operation will help reduce the risk.	An increased risk of wound infection, chest infection, heart and lung complications, thrombosis.
<b>Death.</b>	Death is extremely rare due to knee replacement	

## TOTAL KNEE ARTHROPLASTY

(knee replacement)

### **General risks of having an operation**

There are risks with any operation:

- Secretions may collect in the lungs causing a chest infection.
- Clotting may occur in the deep veins of the leg. Rarely part of this clot may break off and go to the lungs. This can be life threatening.
- Circulation problems to the heart or brain may occur which could result in a heart attack or stroke.
- Death is possible during or after an operation due to severe complications.

### **Alternative treatments**

**Walking aids** such as a walking stick.

**An exercise program** can strengthen the muscles around the knee joint and sometimes improve positioning of the knee and relieve pain.

**Nonsteroidal anti-inflammatory drugs**, or NSAIDs. Some common NSAIDs are aspirin, ibuprofen and cerebren.

**Corticosteroids** such as prednisone or cortisone reduce joint inflammation but can cause further weaken the bones in the joint. Side effects from corticosteroids are increased appetite, weight gain, and lower resistance to infections.

**Osteotomy.** The surgeon cuts the bone away at a point from the damaged joint and restores the joint to its proper position, which helps to load weight evenly across the joint. For some people, an osteotomy relieves pain. Recovery from an osteotomy takes 6 to 12 months. The function of the knee joint may get worse and the patient may need more treatment.

### **Recovering from your operation**

After the operation, the nursing staff will closely watch you until you have recovered from the anaesthetic. You will then go back to the ward where you will recover until you are well enough to go home, usually 7-10 days after surgery. If you have any side effects from the anaesthetic, such as headache, nausea, vomiting, you should tell the nurse looking after you, who will be able to give you some medication to help.

#### **Pain**

You can expect to have pain in the operation site. You will have either:

- An injection into your spine – an epidural - which may be connected to a fine tube and a pump which sends painkiller into your spine. This can cause headache and soreness at the injection.
- A patient controlled analgesia which, when you press a button, releases a painkiller into your IV drip. This can cause nausea and vomiting, sleepiness, and/ or trouble emptying your bladder. These pain-killing devices will stay in for 24 – 48 hours depending on the amount of pain you have.

#### **Diet**

You may have a drip in your arm, this will be removed by the second day after your operation. To begin with, you can have small sips of water, then slowly take more until you are eating normally.

#### **Wound**

Your wound will be a cut about 20 to 30 cms down the front of your leg from above to below the knee and will be closed with either stitches or clips. The stitches or clips will stay in for 10 to 14 days. A dressing will cover the cut and you will have a drain to drain any blood and fluid from the wound into a small bag. This is removed 24 to 48 hours after operation – or once the drainage has stopped. You can shower 1 or 2 days after surgery.

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### **(knee replacement)**

A waterproof dressing will be put on over the top. Your dressings will be changed as ordered by the surgeon. You may go home with a dressing covering your wound until your stitches or clips are removed. Continue to keep your wound clean and protected until healed and no seepage is present.

#### **Your lungs and blood supply**

It is very important after surgery that you move as soon as possible. Pump your feet backwards and forwards and bend and straighten your non-operated leg at the knee. This prevents blood clots forming in your legs and possibly travelling to your lungs. This can be fatal. You will be shown which of your pre-operation exercises to continue after surgery. You will start walking the second day after surgery with the use of walking aids. You will be told when you can put your full weight on your new knee. Also, you need to take ten deep breaths every hour, to prevent secretions in the lungs becoming stagnant. If this happens, you may develop a chest infection. At all costs, **avoid smoking** after surgery as this increases your risk of chest infection.

#### **Exercise**

You will feel tired for a few weeks after surgery. You need to take things easy and return to normal duties, as you feel able to. It takes about 3 months to recover. You will be given exercises to do for a month after your surgery. You will also be shown how to safely climb stairs, shower, dress and toilet yourself. There are a number of movements to avoid:

- Avoid jumping - even from low surfaces.
  - Avoid sudden jolts to the leg (e.g. stepping off kerbs).
  - Avoid gaining weight, which puts extra stress on your joint.
  - Keep to low - key activities at work and at recreation.
  - Avoid kneeling on your new knee joint.
  - Be careful in slippery, cluttered or uneven areas so that you don't fall.<sup>xiii</sup>
- You will be told about these before you go home.

#### **Looking after your knee joint**

Joint replacements can become infected at any time after the surgery from the first post-operative day to many years down the line. You can take the following steps to help prevent infection:

- Take antibiotics before dental or any medical procedure.
- See your doctor to treat all suspected urinary tract infections.
- Look for signs of infection in the knee including pain, redness, swelling or increased warmth.
- Your new joint replacement may trigger airport metal detector alarms. We will give you a certificate that verifies that you had a knee replacement.
- Keep in mind that you need to protect your knee replacement to ensure a long lasting, successful result. Follow all instructions concerning any activity restrictions.

#### **Tell your Doctor if you have:**

- Redness, swelling or warmth around the cut
- Leakage from the cut
- Fever and chills.
- Severe knee pain that is not relieved by prescribed painkillers.
- Sudden sharp pain and clicking or popping sound in the knee joint
- Loss of control over leg movement
- Loss of leg movement
- Further surgery planned for the future i.e. dental work, bladder catheterisation, examinations of the bowel, bladder, rectum or stomach.