

# Knee Replacement Surgery

**A**re you unable to move around like you used to? Not so 'quick on your feet'? Is it painful to go walking at the shops for any length of time, commuting, taking the dog for a walk, climbing stairs, walking on uneven ground, or even getting up out of a chair after a period of sitting? Have you already tried medication, injections, and physical therapy and nothing seems to work at improving or resolving your symptoms completely? If that's the case, it may be time to consider knee replacement surgery.

Also known as arthroplasty, it is one of the most common bone surgeries performed by orthopaedic surgeons. During the procedure the surgeon removes damaged parts of the knee joint and replaces them with artificial joint made of metal or plastic. The artificial joint is then attached to the thigh, shin bone and/ or kneecap with a special acrylic cement. A knee replacement can resolve your persistent pain and restore movement that will allow you better quality of life.

## WHY WOULD I NEED SURGERY?

Your knee joint is made up of the lower end of your thigh bone (femur) and the upper end of your shin bone (tibia). These normally glide over each other easily as you bend and straighten your knee, because they're covered by smooth cartilage. But if your cartilage is damaged by an injury or worn away by arthritis, it can make your

joint painful and stiff.

Osteoarthritis is the main reason why people have knee replacement surgery. The age-related condition is very common and occurs when the cartilage, that cushions the bones of the knee joint, has been damaged by past injury or degraded by wear and tear.

Other reason may include:

- **rheumatoid arthritis** – when the body's immune system has 'attacked' and destroyed the lining of the knee joint;
- **deformities** – where people for different reasons (whether genetic or following an accident) have bowed legs or knock-knees often have joint replacement surgery to correct knee and leg alignment; and
- **knee injuries** – a badly broken bone or torn ligaments around the knee can result in arthritis developing causing pain and loss of movement.

## DIFFERENT TYPES OF JOINT REPLACEMENT

- 1 Total knee replacement.** This is probably the most common type. The surfaces of both your thigh bone and

your shin bone that make up your knee joint are replaced.

- 2 Partial knee replacement.** If only one side of your knee has been affected by arthritic changes this surgery may be a possibility. It will depend on how strong your knee ligaments and the rest of your joint is. They essentially only replace the inner or outer side of your knee joint.

- 3 Patellofemoral replacement.** This replaces the under surface of your kneecap (patella) and the groove the kneecap sits in on the femur. This can be effective for people with chronic kneecap arthritis.

- 4 Complex (or revision) knee replacement.** A complex knee replacement may be needed if you're having a second or third joint replacement in the same knee, or if your arthritis is very severe. Some people may need a more complex type of knee replacement usually as a result of (i) major bone loss due to arthritis, fracture, osteoporosis; (ii) major deformity of the knee; or (iii) weakness of main ligaments.

- 5 Cartilage restoration.** If your knee only has an isolated area of injury or



wear this specific area can be replaced with a living cartilage graft or cells which grow into cartilage.

Knee replacement surgery takes approximately 1 to 2 hours. The surgeons can choose precise designs specific to you – your height, weight, activity level or sporting desires. The implants are even anatomically designed for women or men, are built to allow for movement and made of a variety of materials including metal, ceramic or plastic. Today's implants can last as long as 20 years.

## PREPARING FOR A KNEE REPLACEMENT

Before going into hospital for your surgery, where you could stay for anything up to a week, consider what you will need once you return home. This way you will be prepared and thus reduce any anxiety you have of leaving the hospital.

### Preparing Your Home

- Family or friends may be needed to help you bathe safely, dress or cook meals.
- Stock up on food and meals.
- Consider your living space – is it safe from dangling cables, loose carpets, anything that may trip you up?
- If your bedroom is upstairs you could consider making a temporary sleeping space downstairs for the first few weeks.
- Arrange things that you may need in one place – chair, television, remote controls, books, medicine, telephone for easy access.
- Do you have handrails in the shower/bath area – if not, you can rent these and have them set up before you go to hospital.

### Preparing Your Body

- Being stronger before surgery greatly helps your recovery afterwards. Your physical therapist can teach you exercises to strengthen your thigh, calf and buttock muscles.
- Hand and arm strengthening exercises are also helpful as you will need them when using crutches.
- Have lessons on how to walk with crutches and navigate stairs before the surgery so this is less daunting of a task the day after theatre.
- Stop smoking and drinking alcohol.

- Lose weight – if you have sufficient time losing weight through diet and exercise will help ease your recovery and facilitate a successful outcome.

- A compression stocking may be prescribed for your 'good leg' this is to help prevent a deep vein thrombosis (DVT) which can develop post-surgery if you are not physically active.

### Preparing Your Mind

- What are my alternatives? Your surgeon has probably considered all other options, be it medication, arthroscopy and physical therapy to improve your symptoms. You must embrace this procedure and be fully informed by your surgeon and physical therapist on what to expect. Don't leave any question unanswered, no matter how small or trivial it may seem.

- Being positive and not apprehensive about this will aid your recovery. Accepting it will be challenging but with the help of your medical team, friends and family you will potentially have a better quality of life in the long term.

## RECOVERING FROM KNEE REPLACEMENT

### In Hospital

Once the anaesthetic has worn off and the epidural allows you to feel and move your leg, you will start exercising. Exercising in bed can start mobilising the joint by bending it and contracting the muscles of the thigh. The sooner you start this, the better. Your physical therapist will guide you through these exercises and help you to get out of bed and start walking within the first day or two.

You may also use a continuous passive motion exercise machine. This slowly bends and straightens your knee while you're in bed, ensuring that you don't stiffen up. The movement can also help to reduce swelling.

You'll stay in hospital for 4 to 5 days, possibly up to a week after your surgery. You will be sent home once you are safely moving around with a walking frame or crutches, there are no signs of infection and your pain is manageable.

### At Home

It usually takes between 6 to 12 weeks to

recover from knee replacement surgery. This differs with each person. Your new knee will keep getting better and stronger for up to 2 years as scar tissue heals and muscles regain their strength and stamina. You may need to wear a compression stocking for several weeks at home. Try to build up your daily activities and independence gradually.

Your walking frame may be downgraded to crutches, and then from there to one crutch or a walking stick, to eventually walking with no aids over the coming weeks.

You should be able to drive between 6 and 8 weeks after surgery. This will depend on your leg strength and control. Check your motor insurance too, to see what your policy allows.

You should be able to return to work after 6–8 weeks, even sooner depending on your job and the physical demands. It may help if you do lighter duties at first and then gradually build up to your usual work activities.

Don't sit with your legs crossed for the first 6 weeks. After 3 months, you can try kneeling using a soft cushion.

You may notice swelling of your knee, ankle and/or foot after surgery. This can last for 3 months or more. Keeping your foot raised, for example on a footstool, can help to reduce swelling, but don't get too comfortable. It is crucial you move often (every 30–60 minutes maximum) to reduce your risk of a blood clot and ensure movement through your new joint.

Physical therapy will continue with a home exercise programme and maybe some group sessions, if available. Exercises will focus on strengthening both legs, improving your endurance and stability on your feet. Flexibility exercises and stretches will be given to ensure you maintain full range of movement in your new knee and the joint doesn't stiffen. Most people also feel or hear some clicking of the new implants in their knees when bending or walking. This is normal and you'll probably get used to it over time.

Your physical therapist will guide you through returning to activities such as walking, swimming and cycling as well as maybe eventually back to golf, jogging and many more sports and hobbies you love.

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