

Total Knee Replacement

Total Knee Replacements are performed for arthritic knees. The indication for doing surgery is for pain relief and function. It should only be undertaken when all non-operative measures have failed and the patient is substantially pained and disabled in every day activities.

Success rate-

Patients have a 90% success rate with good pain relief function and are satisfied. Implants have a 95% 10 yr survival rate. i.e 95% patients still have knee in place and functioning well at 10 years. After this time people start to wear or loosen their joints and it varies depending on usage.

Risks or Complications

5% chance of **ongoing pain** from the knee- unknown cause
5% chance of complications which can occur around time surgery.

Deep Vein Thrombosis- blood clot in the leg can move to lung called **Pulmonary Embolus**. Prevented by Blood thinners and early active movement.

Stiffness- Not regaining knee range of motion. Most patients expect to get leg straight and bend to approx 110-120 degrees, you will not regain full range of motion. Patients who have a stiff knee before surgery have a greater chance of stiff knee after surgery. Anything less than 90 degree bend is poor. Prevention is important. Early active exercise, pain management and hard work by patient are required. This can be a painful surgery and without good pain relief its hard to move and patients must be vigilant at doing there exercises daily and independently. Failure to regain movement may require further surgery manipulation and admission to hospital. The first 6-8 weeks important. Tip don't sit with the knee semi flexed, don't sit in a lazy boy chair.

Instability- knee feels unstable.

Extensor mechanism rupture- loss of knee extension can occur if you fall after surgery or use weights on the leg during physio.

Periprosthetic fracture – falling can cause the bone to break around the implant.

Nerve injury- numbness and weakness to the foot. Often recovers but can be permanent. Increased risk if you have a knock knee deformity.

Infection- Approx 1-2% cases.

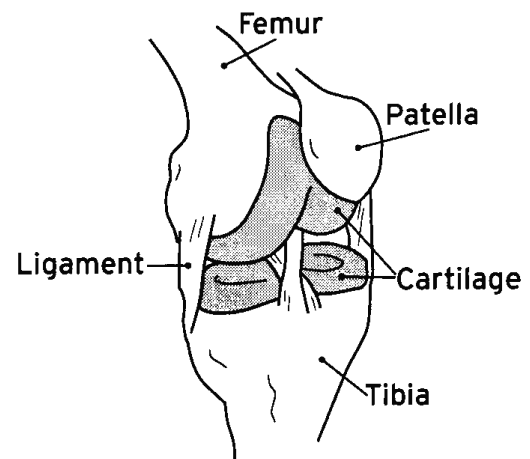
Patients who are diabetic and over weight have an increased risk. HBA1C levels are a guide to that risk and must be within normal limits to safely proceed to surgery.

Our biggest and most worrying issue is infection. If seen and treated early can save the knee. If infection gets established the knee will have to be removed. It is imperative to

prevent infection. Therefore any sources have to be got rid of before surgery. Being unwell dental issues all have to be treated first. Important that if in the post op period there is any concern regards a wound infection that there is no delay in contacting your surgeon. Urgent washout of the infection maybe required and antibiotic alone is not sufficient.

The knee joint is the largest joint in the body and is made up of the kneecap (patella), thigh bone (femur) and shin bone (tibia). Articular cartilage is a smooth elastic tissue that covers and cushions the surfaces of these bones and allows them to move smoothly. Menisci are “pads” of cartilage found between the femur and tibia that act as shock absorbers to protect bone surfaces. Ligaments give support to the knee in all directions. The knee moves like a hinge. These movements are generated by powerful leg muscles.

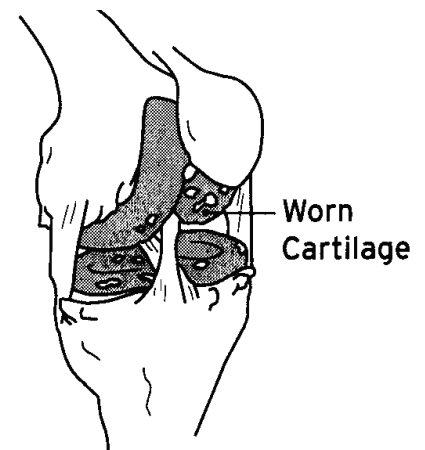
A healthy knee moves without pain because the joint surfaces are covered and protected with cartilage. When the cartilage wears away, the bones rub together causing pain. Bony spurs can form in the knee joint or under the kneecap, which can make weight bearing, walking and even sitting very painful. This damage to the knee structures can be caused by osteoarthritis, rheumatoid arthritis, and previous knee injuries.



Normal Knee Joint

KNEE CONDITIONS

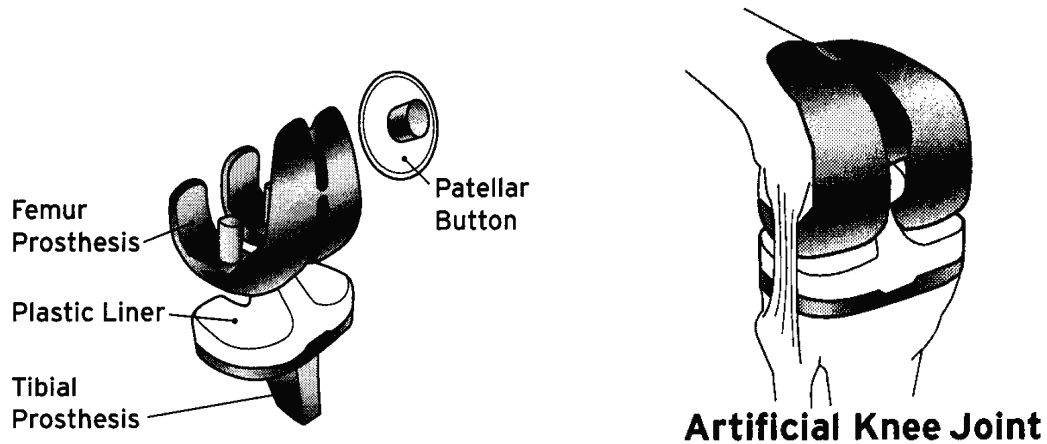
The most common reason for joint replacement is osteoarthritis. It causes the breakdown of cartilage on the ends of the bones resulting in joint pain and stiffness. This condition may require joint replacement. Other disease conditions requiring joint replacement include rheumatoid arthritis and injury to the joint.



Osteoarthritic Knee Joint

Surgery

In total knee replacement surgery, the surgeon replaces the diseased joint with an artificial joint. The damaged bones are reshaped to fit the artificial joint. The ends of the thigh bone and shin bone are covered with metal shells separated by a plastic liner. If the kneecap is damaged, it may be lined with a plastic disc. This surgery takes about 1 hour. Today, many patients who have knee replacement surgery can move their joint better, have less pain and are able to walk more comfortably for many years.





On the night before surgery:

- You **must not** eat any solid foods after midnight.
- Do not drink alcohol for 24 hours prior to surgery.
- Try to avoid smoking for 24 hours prior to surgery, or longer if possible.
- You may water up until 4 hours before surgery.
- If you eat anything after midnight, or drink any fluids during the 4 hours before your operation, your operation will be cancelled.
- It is important that you do not have anything in your stomach when you have an anesthetic. Your doctor will tell you if any of your regular medication should be taken the morning of your operation. Be sure to take it with just a sip of water.
- You should have a shower the night before and the morning of your surgery and wash yourself with the soap brush provided. This helps decontaminate the skin of bacteria that can cause wound infections. The importance of this has been shown to reduce the risk of getting a wound infection. (At the Pre-Surgical Screening visit you will be provided with two chlorhexidine scrub brushes with instructions on how to use them.)

On the day of surgery please follow these instructions:

If your surgery is being done at Hotel Dieu Hospital, on the day of surgery report to the Day Surgery Unit on the second floor at HDH. Ask for directions at the Information Desk in the Main Lobby, Brock St. entrance.

If your surgery is being done at Kingston General Hospital, on the day of surgery report to the Same Day Admission Center on the second floor at KGH. Ask for directions at the Information Desk in the Main Lobby, Davies entrance.

Please bring the following with you to the hospital:

- Your Ontario Health Card.
- Any other private insurance cards.
- All your current medications in their original containers, including Insulin and/or Diabetic pills. If you use inhalers (puffers) of any kind please bring all of them, even if you are not currently using them. If you use nitro-glycerine spray or tablets please bring this with you. You should include any herbal or non-prescription medications.
- **Your hearing aid(s) if you have one, dentures (including containers for each).**
- A housecoat and slippers.
- Do not bring any valuables to the hospital (including cell phones, laptops, DVD players, IPODs).
- Unless you are told otherwise, do not bring your walker to the hospital. One will be provided for you.
- If you have a pair of crutches, please label and bring them to hospital with you. If

- you do not have any crutches, you can purchase them from the hospital.
- Please label and bring your long handled shoe horn, and sock aid to practice with after your surgery.

You will be reminded before your surgery regarding the following:

- Remove any dentures. Tell the nurse or anesthesiologist if you have capped teeth, a dental bridge or dental plate.
- Do not wear make-up or nail polish. The doctor must be able to see the colour of your skin and nails during the surgery.
- Refrain from wearing perfume, cologne or scented personal care products.
- Try not to wear jewellery, including rings to the hospital.
- Remove contact lenses.

Rehabilitation

Exercises are important to help you become more independent and return to activity safely. The physiotherapist will teach you specific exercises to help increase your movement and regain your strength. Health team members will inform you about how much weight to put on your new joint. An **activity calendar** will be provided to serve as a guide for you to monitor your daily progress.

Your physiotherapy program begins the day of your operation and you will continue to meet with the physiotherapist during your stay to guide you through your exercise program. The physiotherapist will teach you the following:

- Deep-breathing exercises to help keep your lungs clear and prevent pneumonia, as it is common after surgery to take shallow breaths.
- Leg exercises to help increase the blood flow in your legs and prevent blood clots, as you are less active after your operation. Additional specific leg exercises are taught to help increase movement and strength.
- Transfers to the bed and chair and back safely.
- Walking on flat ground and on stairs with a walking aid.

A copy of the “KNEE EXERCISE PROGRAM” instructions can be found at the back of this booklet. Only do the exercises that are checked off by your therapist. Bring these sheets to all therapy sessions so appropriate changes can be made as you progress. **It is important to ice your affected joint regularly throughout the day to help with pain control and swelling. Whether sitting or lying down, keep your operated leg elevated.**

- Your rehabilitation program will continue while you are at home.
- Your physiotherapist will give you a home exercise program.
- **You must continue to work hard on your exercise program after you are discharged.**
- By 4-6 weeks after surgery you should be walking with more confidence, have more strength and be able to walk longer distances.
- Most routine primary knee replacements should not need to use any walking aids by 6 weeks
- Be careful not to overdo it and **listen to your body!**
- If you tire or have pain, stop what you are doing and rest. Let your discomfort be your guide.

Whether you attend outpatient physiotherapy at St. Mary's of the Lake Hospital, another community physiotherapy site, or receive physiotherapy in your home will depend on a number of factors that will be discussed with you by a Community Care Case Manager before you leave the hospital.

REMEMBER TO TAKE YOUR TIME. You will have good days and you may have days when you feel you are not making progress. **THIS IS NORMAL!** The majority of people who have joint replacements do well and are happy with the results.

By the time you go home from hospital you will be able to:

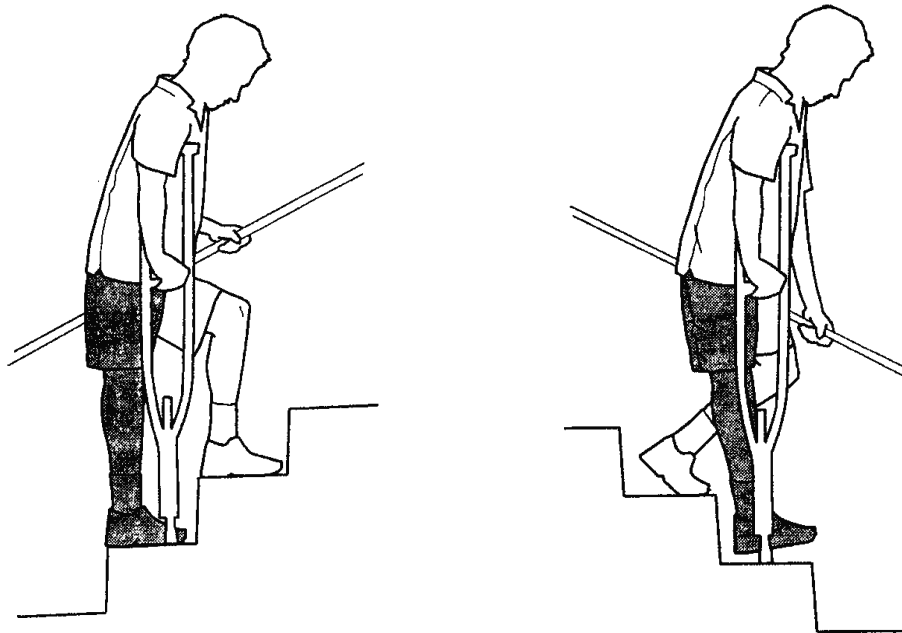
- Get safely into a chair, into a car, onto a toilet, into a bed, and into a shower or tub independently or with minimal assistance.
- You will be able to dress yourself with the help of assistive devices such as a long handled shoehorn.
- You will be walking by yourself using a walker or crutches and will be able to go up and down stairs.
- Give your own anti-coagulant injection safely and with good technique.
- Recognize the signs and symptoms of wound infection.
- Recognize the signs and symptoms of a blood clot (Deep Vein Thrombosis).
- Have your comfort level maintained by oral medication.
- Understand and manage your pain medication schedule independently.

During your stay your discharge plans may change. The orthopaedic team will ensure that the best plans are in place for your discharge.

Main advice is start using it straight away like a normal knee no restriction, get walking, get bending as pain allows. Don't over do it, no weight training no sports for 3 months but attending the gym daily using elliptical and stationary bike is acceptable and recommended.

Transferring

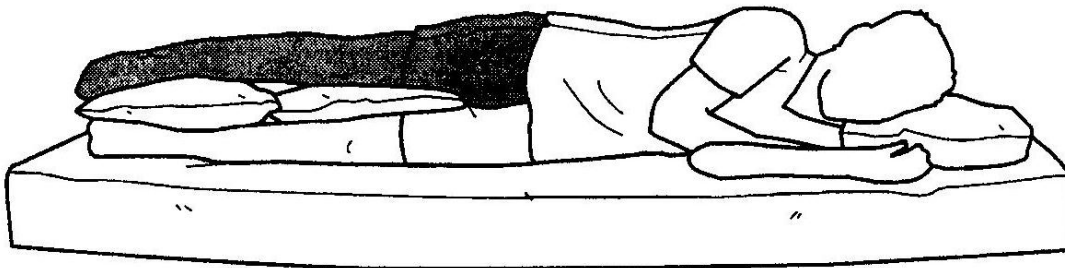
- When sitting down or standing up, always keep your operative leg forward. This decreases the amount of stress and weight on your new joint. Avoid twisting. Instead move your feet to turn.
- When using a walker or crutches (on flat ground), bring the walker or crutches forward first, then the operative leg. Take the weight through your hands as you step up to the affected foot with the good foot. When using crutches, take the weight through your hands and not your underarms.
- When climbing **stairs**, use a handrail and crutches or cane. Step UP with your good leg first. Follow with your operated leg and crutch one stair at a time. When going DOWN, place your crutch on the stair below. Step down with your operated leg first. Follow with your good leg, one stair at a time.
- If you have stairs at home, and a crutch or a cane, it is highly recommended that you practice this a few days prior to your surgery.



- **Sit** on a high, firm-cushioned chair with arm rests. This makes it easier to get in and out of a chair. Avoid soft or low couches or lazyboy chairs. Top Tip; Sit with your feet up on a stool with no support under the knee or bent at a right angle. Sitting with the knee at 45 degrees makes it stiff and hard to regain range of motion. The physiotherapist shows you how to sit down and get up from a chair.

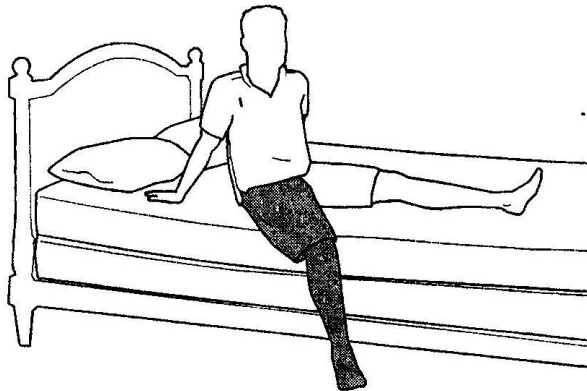


You may find it more comfortable to sleep with a pillow between your knees when lying on your side.



Getting in and Out of Bed

- Back up with your walking device until you can feel the bed at the back of your legs.
- Reach for the bed with your hands.
- Slide your operated leg forward slightly.
- Sit down slowly.
- **Slide your bottom backwards until your knees are on the bed.**
- **Help lift your operated leg onto the bed using your hands or a belt.**



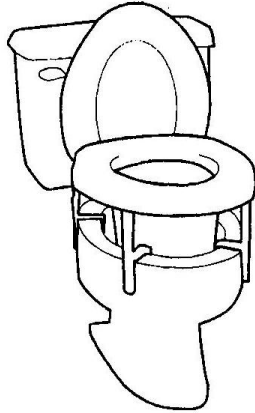
Getting Dressed

Choose loose fitting clothes and socks. Wear flat, closed-heel, slip-on shoes with non-skid soles, as they will provide the best support. Sit on a bed or use a chair with armrests.

- Dress your operated leg first and undress it last.
- Use a reacher or dressing stick for putting on your underwear and pants.
- Using a sock-aid for putting on socks may be helpful.
- Use a long-handled shoehorn for putting on and taking off your shoes.
- Use a long-handled sponge in the shower to minimize bending forward.
- NOTE: A reacher can also be used to pick things up off the floor or to reach items overhead.

Toileting

- Use a raised toilet seat (with arms) over your toilet. (Not shown in diagram – available at medical supply store)
- Back up with your walking device until you feel the toilet seat at the back of your legs.
- Reach back for the arms with your hands.
- Slide your operated leg forward slightly.
- Bend both knees and lower yourself slowly over the toilet seat.

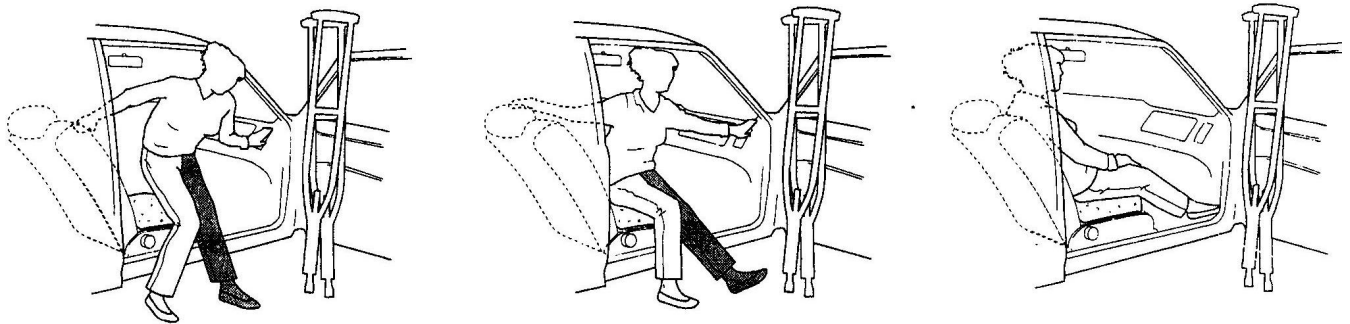


Raised Toilet Seat

Showering easier than bathing don't immerse your wound in water, pools or hotubs until the wound is dry, sealed and all staples or stitches have been removed. A waterproof dressing must be in place.

In the Car

- Back up with your walking device until you can feel the car at the back of your legs.
- Hold onto the back of the seat and your walker, or crutches for support.
- Slide your operated leg forward slightly and sit down.
- Push the seat back as far as it will go and recline the backrest for comfort.
- Slide your buttocks back towards the middle of the car and lift your legs into the car.
- Placing a plastic bag on the seat will make it easier to slide into the car. To get out of the car reverse the procedure.



There are a number of factors that can impact your ability to safely return to driving. These include pain, using mobility aids and taking pain medications that can impair reaction time for emergency stops. **It is recommended that you do not drive for at least 6 weeks after your surgery.** Your surgeon will advise you further at your six week check up. When riding as a passenger in a car, place a firm pillow on the

seat to raise the height. Sit in the front seat. Adjust the seat back as far as it will go. The occupational therapist and physiotherapist reviews car transfers with you.

Every Day Activity

- Go to stores that are easy to get to and have good parking facilities and elevators.
- Bring your walking device with you.
- You may prefer to have a friend or family member pick up groceries for you.
- Some grocery stores offer a delivery service.
- If possible, have someone do the laundry for you. If this is not possible, use a bag or wheeled cart to carry your clothes. Your reacher may also be helpful with this task.
- Keep items that you use frequently within easy reach. Re-arrange kitchen items so you do not have to bend down or reach up to get them.
- Plan ahead to eliminate unnecessary steps.
- Sit down to prepare meals and wash dishes.
- Having some prepared foods or microwave dinners in the freezer may be helpful.
- Slide objects along the counter tops.
- Use a trolley or cart to transport items while you are still using a walking device.
- Attach a bag/basket to your walker to carry things.
- Arrange to have a family member, friend or paid service do heavy tasks such as vacuuming, washing floors, sweeping, changing bed sheets, cutting the grass, shovelling snow etc.
- You should be able to do light housekeeping such as dusting, tidying, dishes etc.

Sexual Activity

Resume sexual activity as soon as you feel comfortable doing so. As your knee heals you may take a more active role. Avoid any position that causes you pain. Following knee replacement there is no position that is restricted only that you are comfortable.

Good Luck Any Concerns or issues Please Contact Dr Wood at his office.