

## Total Hip Replacement

### Benefits of Total Hip Replacement

The indication for hip replacement is pain and stiffness significantly affecting the patients quality of life having failed non-operative measures.

Benefit is pain relief and mobility.

95% success rate restoring mobility and function without complication.  
Uncomplicated procedures would expect a hip replacement to last at least 10years and much longer if cared for.

### Risks of Joint Replacement

5% Patients can develop complications.  
Complications are minimised by preventing them and recognising certain at risk patients.  
Despite everyone's best efforts things can go wrong.

Complications include:

**Deep Vein Thrombosis**- a blood clot deep in the leg

**Dislocation**- where the ball of the hip comes out of the socket

**Leg Length inequality**- surgeons aim to correct and restore leg length. This can be difficult and when trying to make the hip stable to prevent dislocation. To tension the muscles so the hip is not loose the leg can be lengthened. Offset the patient does not notice this if small but if felt may need a shoe lift.

**Nerve injury**- either through retraction of the nerves or stretching during the procedure numbness can result in the leg post operatively. Often this resolves but can be permanent and may lead to a foot drop deformity. Rare but can occur in complex cases.

**Blood Transfusion**- maybe needed if your blood level falls to low.

**Periprosthetic fracture**- a fracture around the implant can occur at insertion of if you sustain an injury to the leg in future.

**Heterotopic Bone formation**- abnormal bone being laid down in muscle, rare but can occur in some individuals.

**Ongoing pain**- often due to the incision or development of bursitis at side hip. Offset resolves with time. Or maybe originating from another source such as back.

**Dr Gavin Wood**

**INFECTION**- our biggest worry and complication in joint surgery.

Incidence 1%.

If it occurs early emergent washout and surgery of the hip is required to save the hip. If it becomes established the whole implant has to be removed and many surgeries are required. Hence the importance of infection prevention and urgent contact to the surgeon when it is suspected.

**Note infection is a concern for future procedures especially DENTAL work. Prior to any procedure antibiotic must be administered. This is for the rest of your life!!**

Risks associated with heart attack, stroke, chest infection are low in those who are medically fit and higher in those with already active health problems.

Diabetic control is of utmost importance .

Poor control leads to a drastic increase in complications especially infections. HBA1C must be checked and less than 7.4 for safer surgery.

Prior to surgery anticoagulants such as Warfarin, Plavix and others have to be stopped for safe surgery.

Preparation is the key to success

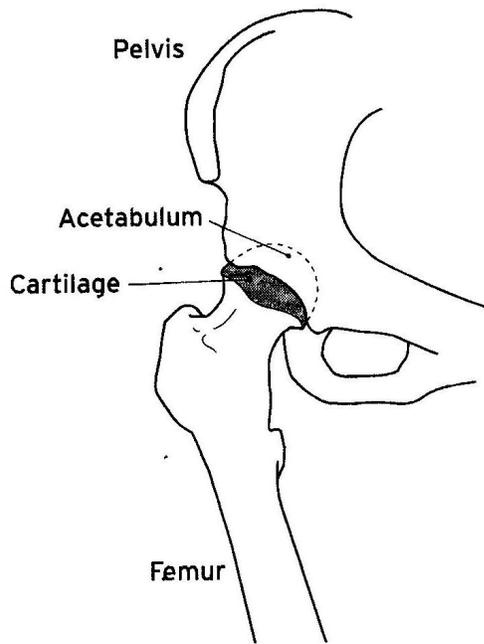
We will help you prepare but only you can do it.

My experience has shown me that patients with a positive attitude who work hard do well following surgery.

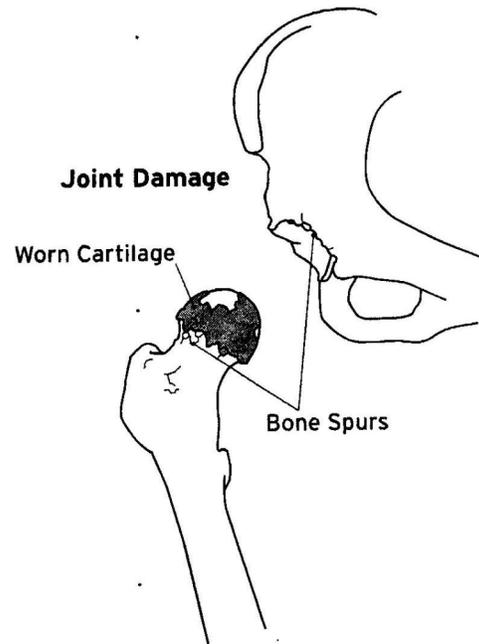
## **Hip Joint Anatomy**

The hip is a weight-bearing ball and socket joint. The hip joint includes the head or “ball” of the femur. The femur, also called the thigh bone, fits into the acetabulum. The acetabulum is the socket of the pelvis. The ligaments and muscles hold the joint in place. Cartilage is the tissue that covers the ends of the hip bones. It cushions the joint. When the hip is healthy, the cartilage is smooth. This lets the parts slide smoothly against each other.

In some kinds of arthritis, like osteoarthritis, the cartilage wears out and the joint becomes stiff and painful to move. When other treatments no longer work and you cannot carry on with normal activities because of pain and limited movement, your doctor may recommend a total hip replacement. The primary goal of total hip replacement is to improve pain and function.

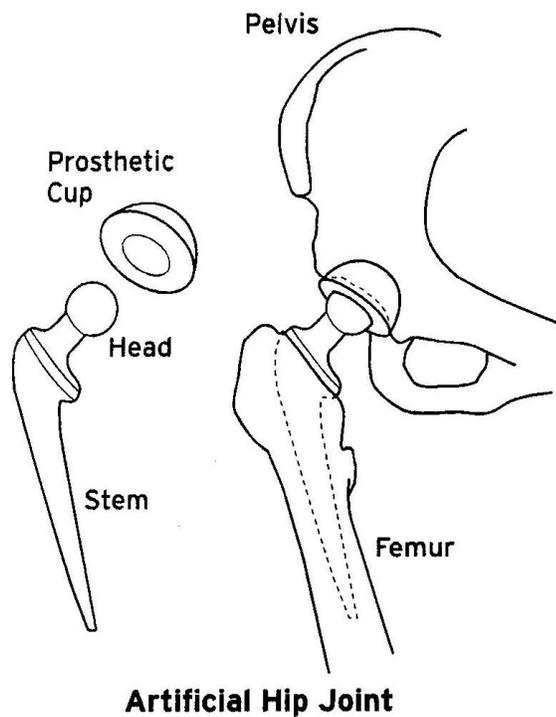


**Normal Hip Joint**



**Osteoarthritic Hip Joint**

During the operation, the doctor removes the head and neck of your femur and the damaged acetabulum. A ball and socket made of steel and plastic replaces your hip joint. This is called the implant or prosthesis. It has a ball at one end, and a stem at the other end. The stem is put in the end of the femur and a ball of steel and plastic fits into the socket of your pelvis. These parts move smoothly together to let you move easily. The operation usually lasts 1 – 1 1/2 hours.



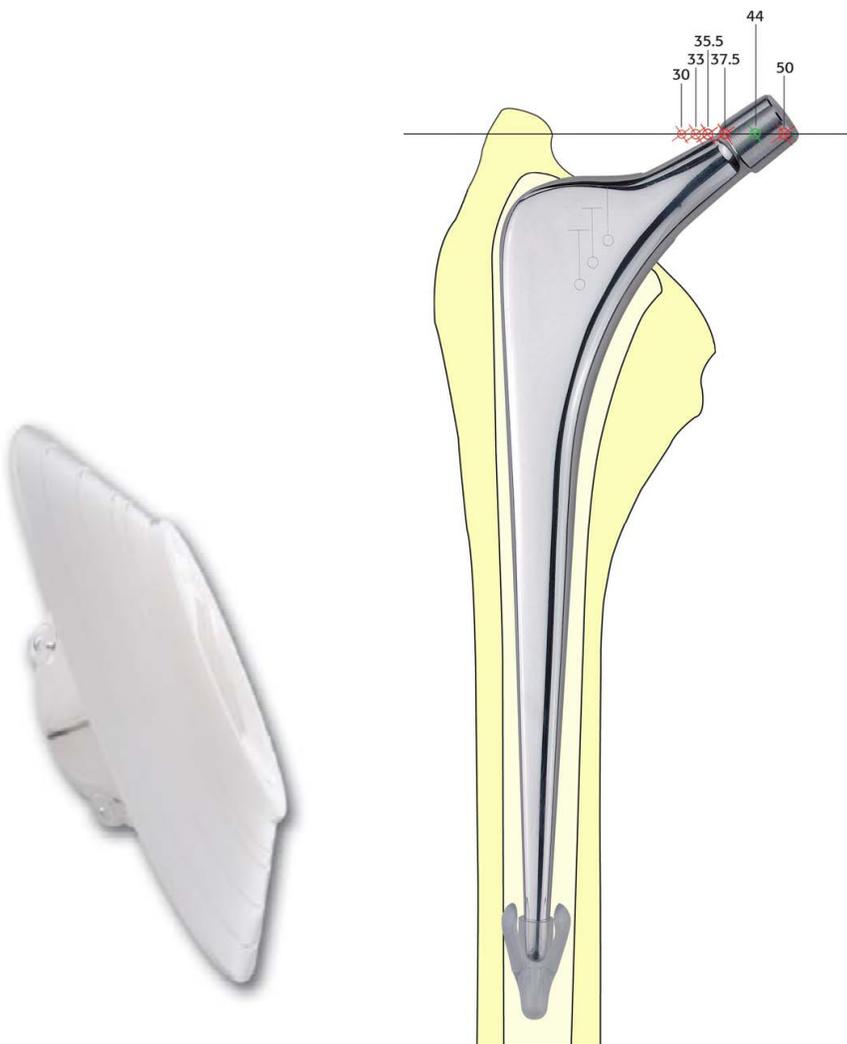
## **JOINT COMPONENTS**

Artificial joint components may be made of medical-grade metal, plastic, ceramic or some combination of these materials. Your surgeon will decide on the type of joint to be used, matching your needs with a suitable type of material.

## Cemented Total Hip Replacement

Implant used is Stryker Exeter stem and X3 Rimfit cup





Results of cemented Exeter are available in pdf Exeter Education  
**Dr Gavin Wood**

## Uncemented THR

Depuy Corail stem and pinnacle cup with biolox delta ceramic bearing surfaces





Ceramic Bearing surfaces, Femoral head, new socket liner inside the metal shell that fits to the pelvic socket.

For more information see pdf file Depuy



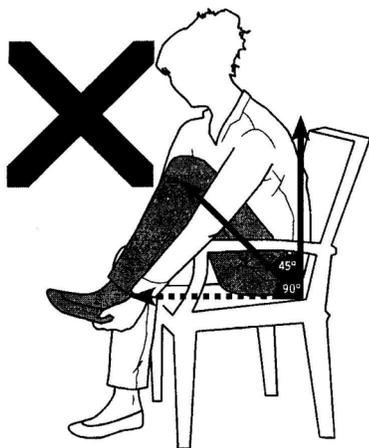
## **Rehabilitation Guidelines for Hip Replacement**

Follow these guidelines in hospital and at home until your return to clinic appointment in 6 weeks.

- Weight Bear as tolerated.
- Use a reacher when picking up items from the floor.
- Avoid crossing your legs at the knees or ankles.
- Keep your knees and feet apart.
- Do not twist your operative leg.
- Do not place a pillow under your knee.

**IMPORTANT: IF YOUR SURGEON, PHYSIOTHERAPIST OR OTHER HEALTH**

**CARE TEAM MEMBER GIVES YOU DIFFERENT ADVICE THAN WHAT HAS BEEN PROVIDED IN THIS HANDBOOK, PLEASE FOLLOW THE SPECIFIC DIRECTIONS YOU RECEIVE.**



**DO NOT bend your hip past 90 degree**



**DO NOT cross your legs at the ankles or knees**

## EXERCISE / ACTIVITY PROGRAM

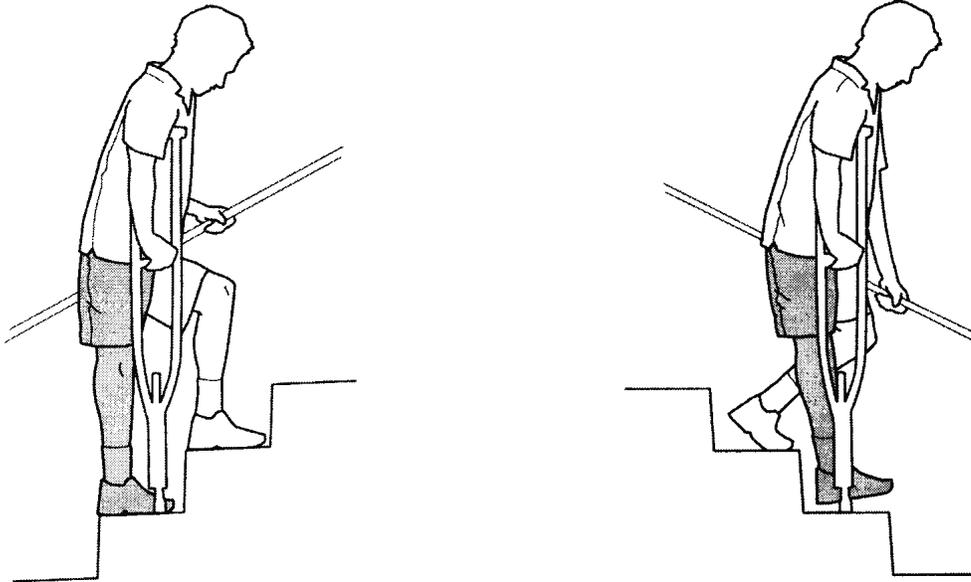
Exercises are important to help you become more independent and return to activity safely. The physiotherapist will teach you specific exercises to help increase your movement and regain your strength. Health team members will inform you about how much weight to put on your new joint. An **activity calendar** 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.
  
- 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. Walking is the best exercise following hip replacement surgery**
- By 4-6 weeks after surgery you should be walking with more confidence, have more strength and be able to walk longer distances.
- Most patients who have a primary hip replacement should be walking independently without 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.

## TRANSFERRING AND WALKING

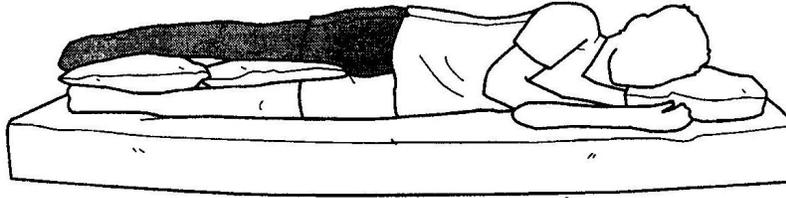
- When sitting down or standing up, always keep your operative leg forward. This decreases the amount of stress and weight on your new joint. Avoid twisting. Instead move your feet to turn.
- When using a walker or crutches (on flat ground), bring the walker or crutches forward first, then the operative 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.



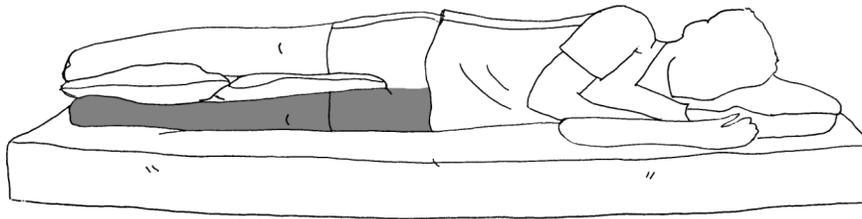
- **Sit** on a high, firm-cushioned chair with arm rests. This makes it easier to get in and out of a chair. Avoid soft or low couches, and chairs including lazyboys. The physiotherapist shows you how to sit down and get up from a chair.



**DO sleep with pillows between your legs for the first 6 weeks after surgery.** You may require assistance placing the pillows or choose to use an extra-long pillow.



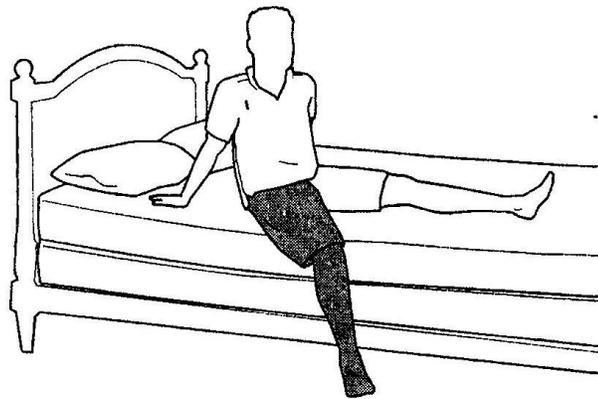
When lying on your side in bed lie on your operated hip.



**NOTE: IF YOUR SURGEON, PHYSIOTHERAPIST OR HEALTH CARE TEAM MEMBER GIVES YOU DIFFERENT ADVICE THAN WHAT HAS BEEN PROVIDED, PLEASE FOLLOW THE SPECIFIC INSTRUCTIONS YOU RECEIVE.**

## 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.**



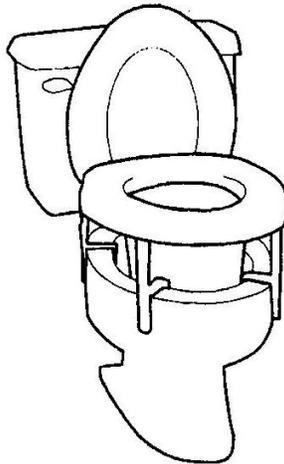
## GETTING DRESSED

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.
- 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.
- You will have an opportunity to practice dressing with an Occupational Therapist in hospital.

## SITTING ON THE TOILET

- Use a raised toilet seat (with arms) over your toilet. (Not shown in diagram – available from 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.

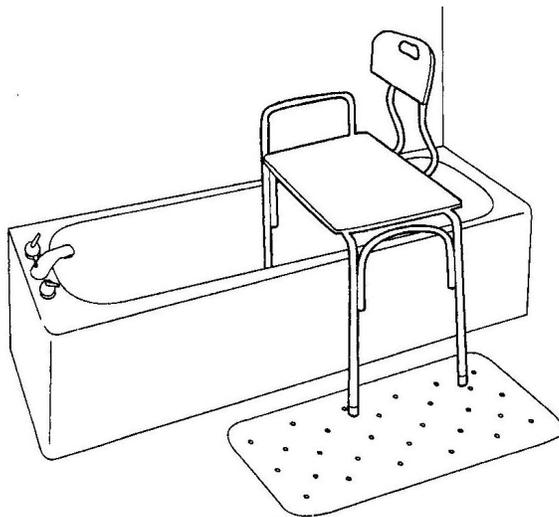


**Raised Toilet Seat**

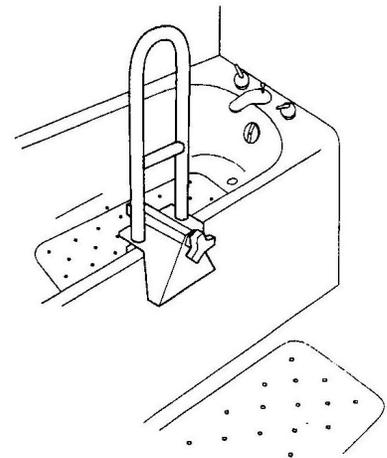
## GETTING INTO THE BATHTUB

Bathing is made easier if you have the following equipment:

- Adjustable height tub transfer bench or bath board.
- Clamp-on tub rail/hand grip.
- Other safety rails/grab bars.
- Long-handled sponge.
- Hand-held shower nozzle.
- Back up your walking device until you can feel the bath bench against the back of your legs.
- With one hand, hold onto the tub rail or the back of the bath bench for support. With your other hand, reach back for the bench.
- Slide your operated leg forward slightly and sit down.
- Lift your legs, one at a time, up and over the side of the tub.
- Use a non-skid bath mat inside the tub and a rubber-backed mat outside the tub.
- To get out of the tub reverse the procedure.
- If you have sliding doors on the tub, you will have to remove them temporarily and install a portable rod and shower curtain.



**Tub Transfer Bench**



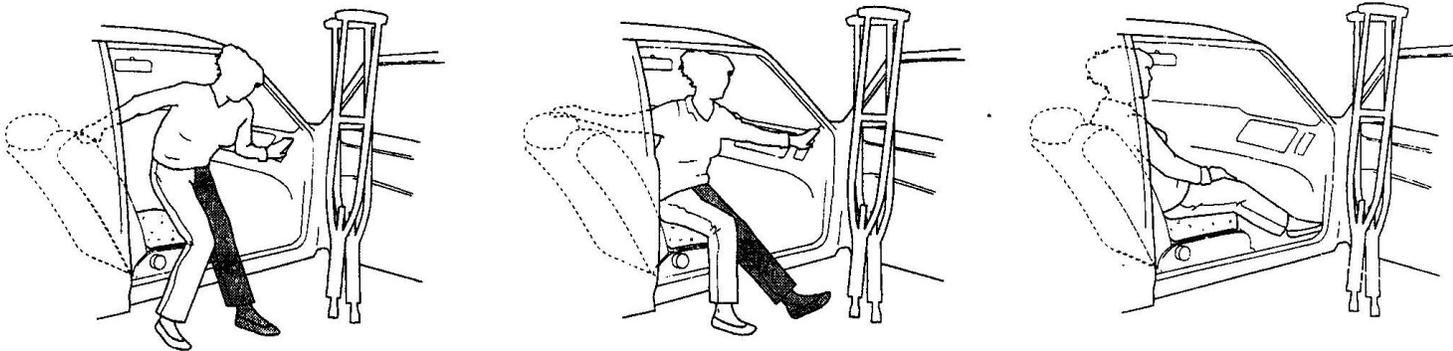
**Removable Tub Clamp**

Gavin Wood

**Dr Gavin Wood**

## GETTING INTO 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.



## DRIVING / RIDING IN A CAR

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 medication 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.

Created

by

Gavin

Wood

## EVERYDAY ACTIVITIES AT HOME

- 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. Let your partner assume the more active role. Most patients prefer to resume intercourse in the “bottom” position. This position requires less energy. As your hip heals you may take a more active role. Avoid any position that causes you pain. A guide for safe positions following surgery is available.

## YOUR INCISION

- Upon discharge from hospital your incision will be covered by a waterproof dressing which will allow you to shower.
- **Your hospital nurse will review with you how to care for your incision/dressing at home and how to identify any signs or symptoms of infection. Please follow the specific instructions given to you by your nurse or surgeon.**
- The staples or stitches are removed in 10-14 days. You may be asked to have your family doctor remove them.
- **Most Important is to contact your surgeon immediately if there is concern with the wound. Or ask your family doctor to contact your surgeon on your behalf.**
- **You MUST NOT take antibiotic unless prescribed by your surgeon**

## DIRECTIONS FOR SELF-INJECTING BLOOD THINNERS

After joint replacement surgery you are at risk for developing a blood clot. Therefore you may be required to inject yourself with a blood-thinning medication called Dalteparin (also called Fragmin). Your nurses will start teaching you and/or your family members how to do this starting the day after your surgery. If you are prescribed Dalteparin, you will need to take this medication for 12-28 days.

Dalteparin is not covered by provincial health care benefits. Most private insurance companies will cover the cost or a % of the cost. You will need to call your insurance company prior to surgery to determine this. If you do not have any other type of private health care benefits, you will need to pay for this medication. Dalteparin costs about \$12.00/day. If you are 65 years of age or older you will likely be eligible to receive Dalteparin through the Exceptional Access Program at the Ministry of Health. A Pre-Surgical Screening nurse will be able to assist you with this.

- Wash your hands with soap and water.
- Place yourself in a reclined position.
- Remove the protective cap of the syringe by pulling with a slight rotation. (**DO NOT** expel air from the pre-filled syringe before using.)
- Clean the area on your abdomen where you will be injecting yourself with an alcohol swab (purchased at your local pharmacy). Use a circular motion from centre outward in about a 2-inch area.

- Pinch the cleaned skin using your thumb and index finger to create a skin fold.
- Inject the entire length of the needle vertically (at a 90 degree angle) into the skin fold. Make sure to hold the skin fold throughout the injection.
- Give the injection **SLOWLY**.
- Quickly pull the needle out and release the skin. **DO NOT** rub the site after injection as it may cause bruising.
- To prevent skin breakdown, inject a different location on your abdomen each day. Do not inject into the belly button.
- You will be given a container to dispose of the syringes after use.
- Discuss disposal methods with your pharmacy.
- Tip If you apply an ice cube to the area of skin before the injection it helps numb the skin and reduce the discomfort and bleeding associated with the injection

## DENTAL WORK AND MEDICAL PROCEDURES

It is important to tell your dentist or health care professional that you have had joint replacement surgery before having any dental work or medical procedures (including procedures with the bladder, prostate, lung or colon). You must be put on antibiotics to prevent infection from moving through your bloodstream to your new joint. **This will be necessary each time you have dental work or procedures and this practice will continue for the rest of your life.** **IF YOU REQUIRE OR ARE CONSIDERING HAVING ANY DENTAL WORK DONE EITHER BEFORE OR AFTER JOINT REPLACEMENT SURGERY, IT IS IMPERATIVE THAT YOU DISCUSS THIS WITH YOUR SURGEON.**

## A NOTE ABOUT AIR TRAVEL

If you are planning a trip by plane at some point after your surgery, ask your surgeon how long you need to wait before flying. It is recommended for long haul flights that you wait at least 3 months. Your new joint may set off metal detectors at the airport. Many people have joint replacements and airport security are used to this. You just need to verbally inform them which joint was replaced if the detector is triggered. If you are must fly within 3 months of having hip surgery, bring your high-density foam cushion to raise the height of your seat. While on the plane, do foot pumping exercises every 15 minutes and walk about the plane every 30 minutes to help reduce the risk of blood clots. Take plenty of fluids as dehydration can predispose to blood clots. Taking a baby aspirin is also helpful.

## Rehabilitation Sheet

**DO THE FOLLOWING EXERCISES EVERY 1-2 HOURS YOU ARE AWAKE AFTER YOUR SURGERY:**

**These exercises are a guide there is no substitute for a good walk. But if stuck at home be sure to follow!**

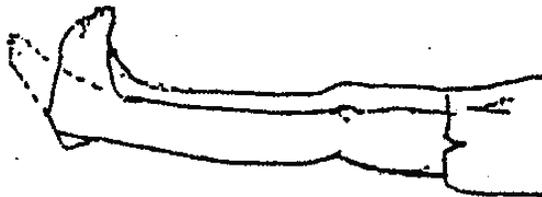
### **DEEP BREATHING EXERCISES:**

- Take a slow, deep breath – in through your nose, out through your mouth.
- If you become dizzy, take a short break.
- You can do this sitting or lying on your back.
- **Do 5-10 repetitions.**



### **ANKLE PUMPS:**

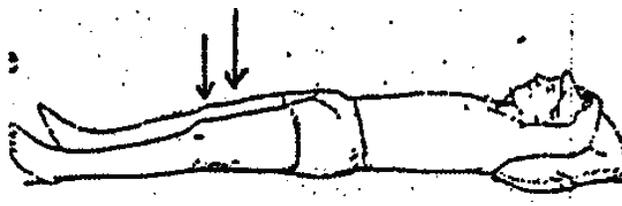
- Bend your ankles up toward your body and then point your feet away from your body.
- **Do 10 repetitions.**



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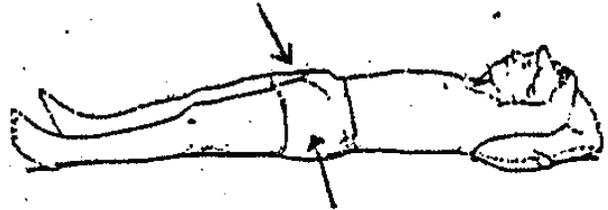
### **. QUADRICEPS CONTRACTIONS:**

- With your knee straight, push your knee firmly into the bed, tightening the muscles on the front of your thigh.
- **Hold to a count of 5.**
- **Do 10 repetitions.**



## GLUTEAL CONTRACTIONS:

- Lying on your back, squeeze your buttocks firmly together.
- **Hold to a count of 5.**
- **Do 10 repetitions.**



## RANGE OF MOTION – Lying:

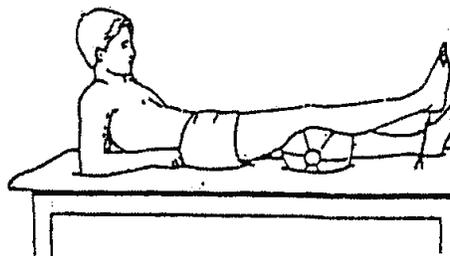
- Lying on your back with a sheet around your foot, cross sheet and hold in hands.
- Bend up your hip/knee.
- When you have bent it as far as possible, gently pull up on the sheet to bend further.
- **Hold for a count of 5 and slowly straighten.**
- **Do 10 repetitions.**
- **Do 4 times per day.**



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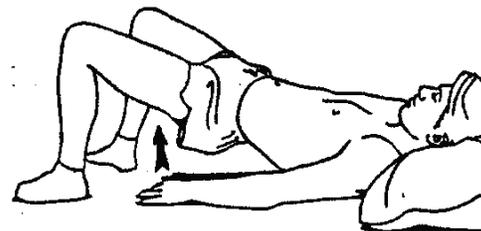
## QUADS OVER KNEE ROLL:

- Lying on your back with a roll under your knee, push your knee down onto the roll and lift your heel off the bed, straightening your knee.
- Keep knee on the roll. (At home use a large juice or coffee can wrapped in a towel for a roll).
- **Hold to a count of 5 and slowly lower.**
- **Do 10 repetitions.**
- **Do 4 times per day.**



## . BRIDGING:

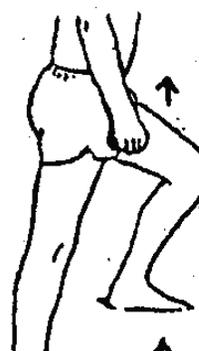
- Lie on your back with both knees bent up.
- Push through your feet and raise your buttocks, keeping your stomach tight.
- **Hold for a count of 5 and slowly lower.**
- **Do 10 repetitions.**
- **Do 2 times per day.**



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## . STANDING HIP FLEXION:

- Holding on to a firm surface, lift foot up onto a step or stair, then off again.
- **Do 10 repetitions.**
- **Do 2 times per day.**



## STANDING HIP ABDUCTION:

- Holding on to a firm surface, raise straight leg out to the side and lower.
- **Do 10 repetitions.**
- **Do 2 times per day.**



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## . STANDING HIP EXTENSION:

- Holding on to a firm surface, raise straight leg backwards and lower.
- **Do 10 repetitions.**
- **Do 2 times per day.**

