



# Hip & Knee Replacement Manual



This manual will provide you with information on what to expect before, during, and after surgery. It is important for you to learn as much as possible about your surgery as it will help you to prepare as an active participant in your care.

Some education provided by The Joint Replacement Resource Center is considered mandatory in preparation for your joint replacement surgery. The mandatory educational videos, and many other optional educational videos, are available on our website.

Please review educational information provided on our website using this link <https://wrha.mb.ca/joint-replacement-resource-centre/>

You will need to inform your surgeons office once you have completed your educational preparation by reviewing this manual and the mandatory educational videos.

**The Joint  
Replacement  
Resource Centre  
Rehab Services  
Ground Floor  
Concordia Hospital  
1095 Concordia**

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This manual has been developed by your health care team in order to provide you with the information you need to prepare yourself and your home so that you can recover quickly and safely after your surgery. Recent improvements in surgical technique have made it so that many patients can be safely discharged from hospital the same day of their surgery. An important key to the success in same day discharge is pre-operative preparation.

This manual is designed for **both inpatient and outpatient surgeries for knee and hip replacements regardless of which hospital you are having your surgery at.** You may have been chosen for an in-patient procedure because of your current health and physical status or because of your social situation. If your Surgeon has advised that you will be having your surgery as an in-patient it is still a good idea to prepare to go home as early as the same day of surgery as some patients do quite well and can end up going home the same day after all.

Just like many other surgeries, these surgeries require you to complete mandatory education. This education is important in the success of your surgery and recovery. The mandatory educational videos, along with many other optional ones, can be found on our website. (website listed on front cover).

Contact the Joint Replacement Resource Centre at 204-661-7307 if you have technical issues.

Please take some time to read through this book before your surgery and write down any questions you may have. These questions can be answered by your surgeon, nurse, community physiotherapist or occupational therapist at any time before your surgery. Bring this booklet with you to each appointment.

**If the information provided in this book is different from what your family doctor, surgeon, or orthopedic team advise you, please follow their instructions.**

**Key Points in preparing for your surgery: (discussed in detail throughout this manual)**

- You could go home any time after surgery so it is important you are prepared to do so.
- Make sure you have arranged for someone to stay with you for 48 hours after surgery, and arrange a support person for even longer for things like housekeeping, groceries, yard maintenance, etc
- As any other surgical procedure, post-operative pain is common so make sure to take pain medication as prescribed.
- You will get up and walk around 2-4 hours after surgery. Make sure you have a plan for walking aides and any other equipment you may need ahead of time and bring your walking aid with you to the hospital.
- Make sure to prepare your home following the tips in this manual; do not wait until the day of surgery or after surgery to do this.
- You will need to fill prescriptions either ahead of time or the day of surgery; the hospital does not do this for you. Be aware of when your pharmacy closes and advise your surgical team upon arrival.
- You are responsible to book your own physiotherapy follow up appointments in the community. You can begin as early as 2-3 weeks after surgery. Manitoba health may cover sessions so call your clinic of choice to inquire about availability. It is critical that you follow your home exercise program as directed as the new joint can stiffen quickly.
- Return to work and return to driving are discussed with your surgeon at your follow up post-surgery.

**Who and When to Call for help**

- If you think you might have an infection after your surgery call your surgeon.
- If you need more pain medication or have excessive bleeding call your surgeon.
- If you have sudden chest pain or shortness of breath call 911.
- For all other questions please call Health Links/Info Sante at 204-788-8200 or 1-888-315-9257.
- If you cannot get ahold of your surgeon go to Urgent Care.

## Introduction to Hip and Knee Replacement Surgery

### Types of Joint Disease

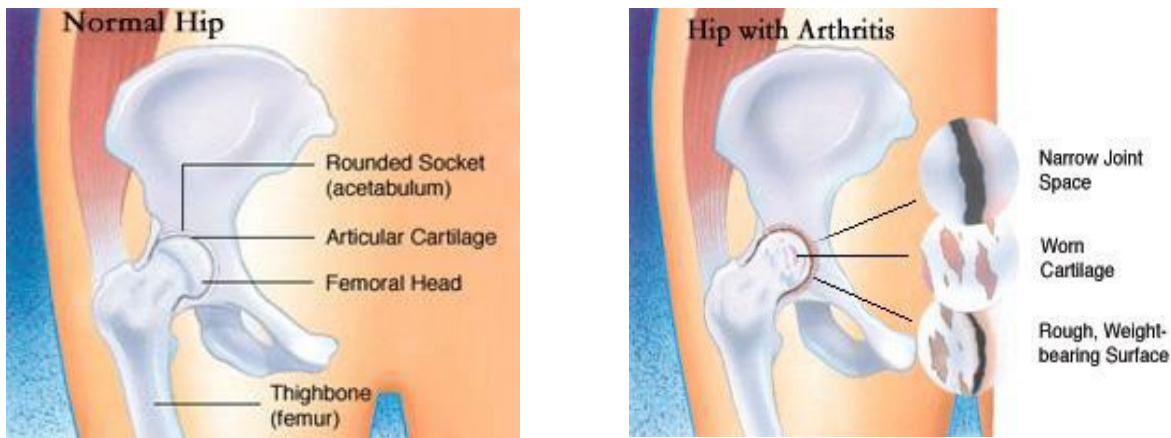
The most common cause of joint disease is Osteoarthritis.

**Osteoarthritis** is a disease that breaks down the cartilage that covers the ends of the bones. This cartilage provides cushioning to the joint. As the cartilage wears away, the ends of the bones become rough and the hip or knee may become painful and stiff.

**Rheumatoid Arthritis** is an inflammatory disease that affects the lining of the joints. Breakdown of the cartilage and bone is a result of chronic inflammation (swelling).

**Osteonecrosis** is death of the bone due to lack of blood supply (avascular necrosis).

### Hip Arthritis



### Knee Arthritis



As the pain in your hip or knee worsens, you tend to use your joint less and less. The result is a decrease in motion as well as loss of strength in the muscles around the joint. Range of motion is a term used to describe the amount of motion a joint can move.

### Surgical Treatment (Joint Replacement)

Joint replacement surgery will remove the parts of the joint that are damaged and replace them with new components that match the original shape of the joint. This will help to ease your pain, correct deformity, improve the joint range of motion, improve daily function such as walking, dressing, hygiene and bathing and enhance your quality of life.

## **Realistic Expectations of Joint Replacements**

Joint replacement surgery is one of the most common and successful surgeries. The majority of patients have significant relief of pain and improvement in function following their hip or knee replacement surgery. The design of hip and knee replacement implants have improved dramatically and the vast majority will last at least 15 years and commonly longer. The surgeon chooses the best type of artificial joint or prosthesis according to your age, the strength of your bone, the shape and condition of your joint, your general health, weight and activity level. The most common reasons for reoperation (revision surgery) are infection of the artificial joint, dislocation (which occurs when the joint pops out of place), and fracture (a break in the bone close to the joint placement). Revision surgery is generally more complex and has a higher complication rate than primary (first time) surgeries. Follow up visits with your surgeon after joint replacement surgery is important to allow for early identification of problems should they arise. It is important that you attend these follow up visits. They typically occur at two weeks for a wound check, and then six to eight weeks following surgery with your surgeon.

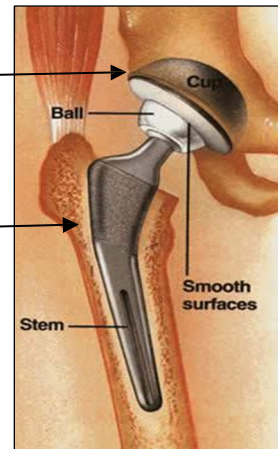
### **Hip Replacement Surgery**

In hip replacement surgery, the damaged bone and cartilage are replaced with ceramic, metal or plastic surfaces to restore hip movement and function. The artificial hip is called the prosthesis.

An incision is usually made measuring 6-8 inches. The surgery usually takes 45-90 minutes. You can watch an animated version of the hip replacement surgery “What is a Total Hip Replacement” on the WRHA Joint Replacement Resource Center’s webpage <https://wrha.mb.ca/joint-replacement-resource-centre/videos/what-is-a-total-hip-replacement/> if you would like more information.

The total hip replacement (THR) prosthesis consists of 2 parts:

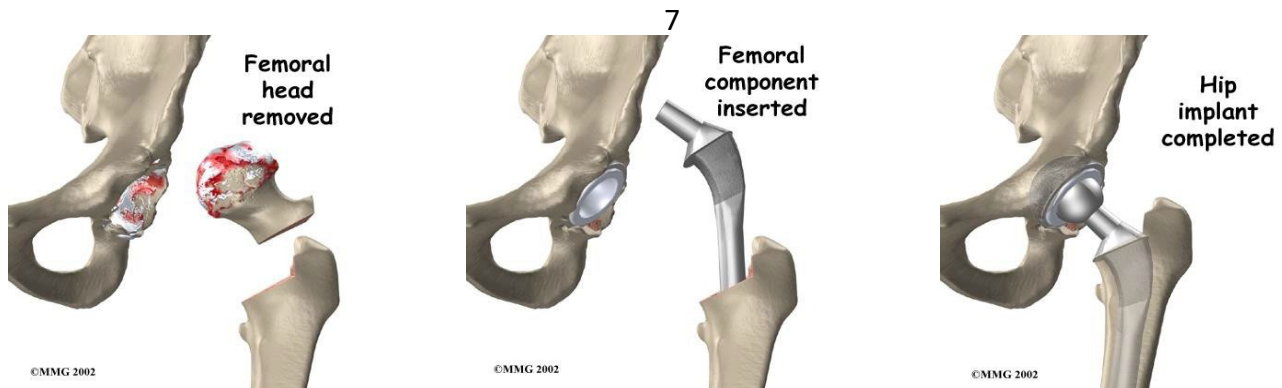
1. Acetabular component (cup) that fits into the pelvic bone.
2. Femoral component (stem) that fits into the femur or thigh bone.



There are two ways in which your joint replacement may be held in place (fixed to the bone):

1. With bone cement.
2. Without bone cement. This uncemented method uses a roughened or coated metal surface that allows bone to grow onto it.

Your Surgeon will select the most appropriate fixation method for your hip replacement based on a variety of factors.



### **Hip Precautions/Movements to Avoid**

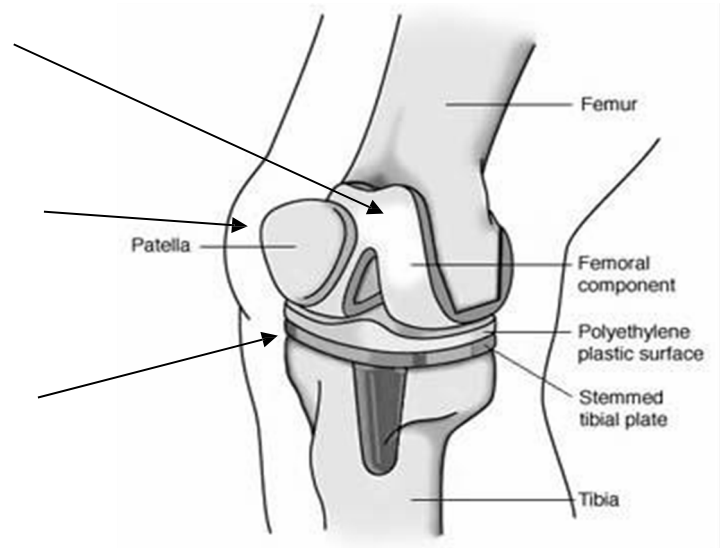
Due to improvements in surgical technique most patients no longer require “precautions”. However a very select few may require them. These are movements that your surgeon does not want you to do if you are at risk of dislocating your new hip. Most surgeons will decide during your surgery if you will or will not end up with precautions. Please ask your surgeon or physiotherapist if there are movements you need to avoid after your surgery.

### **Knee Replacement Surgery**

In knee replacement surgery, the damaged bone and cartilage are replaced with metal and plastic surfaces to restore knee movement and function. An artificial knee is called the prosthesis. Most of the knee replacements that are done today are cemented into place. An incision is usually made measuring 6-8 inches. The surgery usually takes 45-90 minutes You can watch an animated version of the knee replacement surgery “What is a Total Knee Replacement” on the WRHA Joint Replacement Resource Centre’s webpage <https://wrha.mb.ca/joint-replacement-resource-centre/videos/what-is-a-total-knee-replacement/>

The Total Knee Replacement consists of three parts:

1. Femoral (thigh bone) component- metal replaces the weight bearing surface of the thigh bone and has a groove for the patella (kneecap) to move along.
2. Patella (kneecap) – a plastic button is attached to the back of the kneecap to allow better movement along the femoral component.
3. Tibial (shin bone) component – metal with a plastic (polyethylene) component attached, forms a smooth surface the femoral component can move on during movement of the knee joint.



## **Unicompartmental or Partial Knee Replacement Surgery**

In some situations, arthritis has only impacted one side or portion of the knee joint – this is most commonly the medial or inside area in the knee joint. In a unicompartmental or “partial” knee replacement, damaged bone and cartilage on the affected side of the knee is resurfaced with metal and plastic components. The surgical procedure is similar to a total knee replacement; however, recovery time is generally shorter following this surgery due to the smaller incision and less soft tissue impacted.

The partial knee replacement consists of two parts:

1. Femoral (thigh bone) component- metal, replaces the weight bearing surface of the thigh bone.
2. Tibial (shin bone) component – metal with a plastic (polyethylene) component attached, forms a smooth surface the femoral component can move on during movement of the knee joint.

You can watch an animated version of this procedure “Partial Knee Replacement” on the Panam Clinic webpage under patient resources <https://www.panamclinic.org/patient-resources/>. Select the “knee” category and then scroll down until you find “Partial Knee replacement”.

## **Bilateral Knee or Hip Replacement Surgery**

When arthritis affects both joints equally, joint replacement of both sides is occasionally done during the same surgery. This is a longer surgery and requires more time in the hospital. There is more stress on your body, therefore it is only offered to patients who are physically fit and in good health. Good upper body strength and a support plan for managing daily activities after surgery is very important. The advantage to this is an overall faster recovery since there is only one hospital visit instead of two.

## CHAPTER 1: Before Your Joint Surgery

### **The Joint Replacement Resource Centre (JRRC): Education**

The Joint Replacement Resource Centre helps patients prepare for their orthopedic journey. As part of the process, you are required to review educational material through the Joint Replacement Resource Centre website. (Website address can be found on the front cover). If you need help with technology please ask family and/or friends to help you. If this is not possible there are resources in the community that can help you such as Age and Opportunity, Winnipeg Public Library and Manitoba 211.

<https://www.aosupportservices.ca/resources/ao-cyber-seniors/>

<https://wpl.winnipeg.ca/library/ourservices/tech/computers.asp>.

<https://mb.211.ca/results/?latitude=50.15417559999999&longitude=->

[96.8930177&searchLocation=selkirk&searchTerms=computer+skills&exct=0&sd=0&ss=string&topicPath](https://mb.211.ca/results/?latitude=50.15417559999999&longitude=-96.8930177&searchLocation=selkirk&searchTerms=computer+skills&exct=0&sd=0&ss=string&topicPath)

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### **Pain Management**

Joint pain is common in arthritis. It is important that your pain is managed before surgery. When your pain is well controlled you will be more active and stay in better physical condition. The amount of pain you experience can be affected not only by your injury or disease but also by muscle tension, anxiety, frustration, anger, depression and even by the amount of attention paid to the pain. The response to pain differs from person to person. The way it is treated can also be very different. For this reason, it is important you work with your primary health care provider and/or community pharmacist to best manage your pain. Please refer to the booklet sent out titled “Treatment Options for Arthritis of the Hip and Knee” for suggestions related to Health Behavior Change, Medications used and Assistive Devices.

### **Medications**

The following is a list of some of the pain medications which may be used to manage arthritis pain. Talk with your primary health care provider about the best option for you and the appropriate dose you should take.

- Acetaminophen (Tylenol®) – Acetaminophen can be very effective in controlling chronic pain when taken regularly.
- Anti-Inflammatory medications – Anti-inflammatory medications can also be very effective in managing pain. Some of the traditional anti-inflammatory medications include Ibuprofen (Advil®), Naproxen (Aleve®) and Diclofenac (Voltaren®). These medications need to be used with caution as they may cause discomfort and bleeding in your stomach. If you notice any sign of bleeding such as dark stool or spitting up blood, you need to stop the medication and tell your primary health care provider immediately. Celecoxib (Celebrex®) is an anti-inflammatory medication that may cause less stomach irritation. An anti-inflammatory medication should be used with caution if you have high blood pressure or kidney problems.
- Opioid medications – These are stronger pain medications which are rarely used and generally not advised to manage the pain of arthritis. If pain cannot be controlled with the options discussed above please discuss this with your surgeon. Examples of opioids are: Acetaminophen with Codeine (Tylenol #3®), Acetaminophen with Oxycodone (Percocet®), Morphine or Hydromorphone (Dilaudid®). They may have unpleasant side effects and need to be carefully monitored by your doctor. All opioid

medications can cause constipation. Drink plenty of water and eat a diet high in fibre to prevent constipation. You may need to take a laxative such as sennosides (Senokot®) or Restoralax to prevent constipation.

### **How Will I Pay for These Medications?**

You may require prescription medications prior to and after your surgery. Your private insurance (such as Blue cross or Great West Life) and provincial health plans may cover your medication costs. When planning for your surgery, check on your insurance plans and coverage limitations. All Manitobans are eligible for Pharmacare but you must apply. Costs for **approved** prescription medications will be covered once you have met your current annual deductible. For information on how to apply for Pharmacare or to determine your current annual deductible, visit:

[www.gov.mb.ca/health/pharmacare/index.html](http://www.gov.mb.ca/health/pharmacare/index.html) or call Manitoba Health Provincial Drug Programs: in Winnipeg phone (204) 786-7141 or toll free 1-800- 297-8099. Other government programs such as Employment and Income Assistance and Non-Insured Health Benefits (NIHB) may also provide medication coverage.

### **Medical Cannabis**

At this time, medical cannabis is viewed as a potential therapy for managing chronic pain. However, there is currently not enough research on the use of medical cannabis in the management of arthritis symptoms. Further research is needed on the effects of medical cannabis for managing arthritis pain, including the potential interactions with other medications, as well as the risks and benefits. For more information, please refer to the following website:

<https://arthritis.ca/treatment/medication/medical-cannabis>

### **Non-Drug Strategies**

It is important to break the cycle between muscle tension and pain. Relaxation exercises are one way to decrease muscle tension, reduce emotional stress and decrease pain. There are different relaxation techniques. You can choose which one works best for you. Some of these techniques include diaphragmatic breathing, autogenic relaxation, imagery, meditation and progressive muscle relaxation. There is a wide range of online videos, apps, commercial books and CDs available to help you learn to practice these relaxation strategies. The Joint Replacement Resource Center website also has an optional pain management video which provides further information on these non-drug strategies.

### ***Recommended Resources:***

[www.cpa.ca/docs/File/Publications/FactSheets/PsychologyWorksFactSheet\\_ChronicPain.pdf](http://www.cpa.ca/docs/File/Publications/FactSheets/PsychologyWorksFactSheet_ChronicPain.pdf)

<https://arthritis.ca/support-education/online-learning/managing-chronic-pain>

<https://www.aci.health.nsw.gov.au/chronic-pain/for-everyone/introduction-to-pain>

### **Get Your Body in Shape**

The Joint Replacement Resource Center offers an educational exercise video which provides further information on what types of exercises to do and how often.

Here are some suggestions for you to consider:

- Throw away the slogan “No pain, no gain” but keep the slogan “Use it or lose it!”
- Choose low impact activities such as walking, swimming, water aerobics, stationary cycling or chair aerobics to get adequate moderate intensity cardiovascular exercise. When exercising at this intensity, you should be able to carry on a conversation and not be short of breath.
- The Arthritis Society is an excellent resource for exercising with arthritis. Visit: <https://arthritis.ca/>

If you are unsure how to start on your own strengthening program, you could speak to an exercise professional or private physiotherapist in the community for guidance.

<https://mbphysio.org/find-a-physio>  
<https://manitobaphysio.com/for-the-public/verify-a-physiotherapist/>

The exercises included in the Appendix 1 are some of the exercises you will be given immediately following your surgery (Post-Op). You can start these exercises **before your surgery** to familiarize yourself with them prior to having surgery so they are more manageable after surgery. When starting the exercises before surgery, you can start small and build up as your tolerance increases. It is a good idea to start with 5-10 repetitions once per day and then increase as tolerated.

- **2 Hour Pain Rule:** If you have pain for more than 2 hours following an activity or exercise session, you have done too much. Reduce the intensity of the exercise, the duration of the activity or the frequency it is performed until you are better able to manage your pain while including the suggested exercise.

### **Healthy Eating for Healing**

Healthy eating helps to prepare your body for surgery. Your body needs to be well nourished to heal the bones, muscles and skin that are affected by surgery. The nutrients from food provide your body with strength, energy and the ability to heal. People who are well nourished are less likely to develop an infection. The Joint Replacement Resource Center website offers education regarding the nutritional needs of patients having surgery.

In addition to adequate calories, there are several nutrients from food that are important to ensure adequate recovery from your surgery. These include:

- **Calcium** is needed to heal your bones and keep them strong. Good sources of calcium include milk, yogurt, cheese, and canned salmon and sardines (with the bones). Calcium fortified products such as tofu, orange juice and soy or rice milk are also an excellent way to increase your dietary calcium intake. Smaller amounts of calcium are also found in beans and lentils, broccoli, bok choy and oranges. For most adults, aim for 1000-1200 mg of calcium daily.
- **Iron** is a very important nutrient that your body needs to build up red blood cells and prevent anemia. Before your surgery you will have a blood test for anemia. If you are found to be anemic (low hemoglobin in red blood cells), it may be suggested that you increase the iron in your diet prior to surgery. Good sources of iron include meat, fish, poultry, organ meats,

canned oysters and clams, beans (legumes), tofu, some green leafy vegetables and enriched whole grains. Heme iron, the type of iron found in meat fish and poultry, is best used by your body. However, your body can use the non-heme iron in non-meat foods better when eaten with meat or foods rich in vitamin C (see examples of sources under Vitamin C). Remember that certain foods and beverages (coffee, calcium-rich foods) can decrease the absorption of iron along with certain over the counter medications (acid reducers e.g. TUMs).

- **Protein** is needed to maintain and increase your strength. It is necessary for healing therefore your protein needs increase after surgery. High protein foods include beef, pork, fish, poultry, eggs, milk and dairy products, soy milk, beans, nuts, peanut butter and tofu.
- **Vitamin B12 and Folate** are also important nutrients to maintain hemoglobin. Your primary health care provider may be able to provide you with more information if this is a concern for you. Foods containing vitamin B12 include fish, meat, poultry, milk and milk products, fortified breakfast cereals, soy or rice milk and meat substitutes. Good sources of folate include green leafy vegetables, dry beans and peas, fortified grains and citrus fruits and juices.
- **Vitamin C** helps heal wounds, fight infections and absorb iron. Good sources include citrus fruit & juices, peppers, tomatoes and tomato products, cantaloupe, strawberries.
- **Zinc** helps with collagen synthesis and wound healing and can be found in milk and meat products, nuts and oysters.

### **Managing Your Weight**

If you are carrying excess weight, talk to your primary health care provider about following a gradual weight loss program. Extra body weight can interfere with your recovery by delaying tissue healing, increasing fatigue and decreasing your activity tolerance. Gradual weight loss over a period of time, 2 pounds per week, is recommended. Keep in mind that “crash diets” do more harm than good. Gentle exercise may help your weight loss efforts and improve your sense of well-being.

Eating a well-balanced diet, such as that recommended in <https://food-guide.canada.ca/en/> will help support your recovery. If you are concerned you have a poor appetite and do not get enough nutrients, seek advice from your health care provider or a dietitian about how you can improve or supplement your diet. It may also be helpful to add a multi-vitamin mineral supplement and/or a high calorie, high protein liquid nutrition supplement. You **can** improve what you eat right now.

For more information, please contact your primary health care provider or a registered dietitian. To speak to a registered dietitian, you can contact Dial-a-Dietitian at 204-788-8248 or toll free at 1-877-830-2892. You can also visit the Dietitians of Canada website for more information at <https://www.dietitians.ca/>

### **Smoking**

Smoking significantly increases your risk of medical and surgical complications during and after surgery. Smoking increases the risk of infection and can contribute to wound healing issues. Both of

these can result in requiring further surgeries, can extend hospital stays and can contribute to failure of your joint. If you smoke, cut down or quit before surgery. For more information on quitting smoking, contact your health care provider, Health Links (204-788-8200 or 1-800-315-9257) or the Smokers Help Line at 1-877-513-5333 or visit <https://www.mb.lung.ca/> for more information.

### **Prepare your Home**

All patients will return home using a mobility aid (walker, crutches) after joint replacement surgery. Following your surgery, you cannot move around as you normally would, so it is a good idea to make some simple changes to make it easier and safer to manage at home. Below are recommendations you should consider **before** you come to the hospital for your surgery. For people who live in a rental unit, please discuss home modifications with your landlord for assistance.

### **Home set-up**

Make sure there is enough space in hallways and between furniture to accommodate your mobility aid. Remove all tripping hazards (area rugs, cords and repair loose flooring). Make sure your home has good lighting, especially at night. Relocate regularly used items between your knee and shoulder height for ease of access. Move items stored in the basement that are used regularly to the main floor. **Install a railing or grab bar on ALL indoor and outdoor stairs where there are 2 or more steps to navigate. You will be expected to have some form of support (rail, grab bar) available for all stairs before you come in for surgery.** Arrange for sleeping accommodations on the main floor in case you are unable to manage the stairs after surgery. Arrange to have a firm chair with armrests. This will make it much easier to get on and off the chair after surgery. Do not sit on anything that has wheels or rocks to improve safety. Ensure your chairs and bed are the proper height (allow you to get on and off safely and with ease). If your bed or chairs are too low, they can be raised up on blocks. If your bed is too high you may be able to use a small step stool or platform to bring you up to the bed height. Put a high stool in the kitchen for countertop activities.

### **Preparing for personal care**

Choose loose fitting clothing. Wear shoes and/or slippers which have a non-slip sole, are closed at the heel and toe, and allow for swelling. Shoes that you can slip on or have elastic laces are ideal.

### **Meal preparation**

Prepare and freeze meals ahead of time so you can just reheat them after surgery. Stock up on non-perishable items and easy to reheat frozen foods before surgery. If needed, look into different meal services that could be accessed after surgery e.g. Meals On Wheels. Clear your counters off so that you can slide items along them easily.

### **House and yard work**

You will be able to do light housekeeping tasks. Arrange to have a family member or friend assist you with heavier household tasks. If family and friends are unable to assist you, consider hiring private services or accessing community resources (e.g. grocery delivery and home and yard maintenance).

### **Arranging Transportation**

You may be able to obtain a Parking Permit or be eligible for Transit Plus. The Manitoba Parking Permit Program is a program offered through Manitoba Possible. The permit does require a health care professional to fill out part of the form. The form and more information about the program are available at <https://www.manitobapossible.ca/parking-permits>. If you are only going to require this post-surgery, you can have your health care provider in the community complete it or you can ask your therapist in the hospital to complete it on your behalf before you leave.

Winnipeg Transit Plus is a service of Winnipeg's public transit system that provides door-to-door transportation for people who are unable to regularly use the city's fixed route transit system because of a physical disability in accordance with the established criteria. People may benefit from this service before or after surgery and can complete the self-referral application without needing the assistance or input from a health care provider. If only required after surgery, you can complete and submit the form once your surgery date is known. If approved, they will issue you a registration number that will become effective after you have had your surgery. The form and more information on the service can be found online at <https://winnipegtransit.com/en/winnipeg-transit-plus-handi-transit/winnipeg-transit-plus/>. If you are unable to drive or do not have someone to assist with transportation, it is important to arrange alternate transportation before your surgery.

### **How to Obtain Equipment**

In many situations people awaiting a joint replacement surgery require the use of a mobility aid before their surgery. The use of a walking aid (walker, crutches, cane) before surgery can help to decrease pain, increase tolerance and help to decrease stress to your other joints. If you are having issues with self-care tasks (dressing, bathing, etc.) as you wait for surgery, you may benefit from the use of adaptive equipment (e.g. raised toilet seat, bath seat, sock aid). This equipment can help you remain independent, increase your energy and improve your safety. Please speak with a community physiotherapist or Occupational therapist to be assessed for the appropriate assistive devices while you wait for surgery.

### **How Will I Pay for This Equipment?**

Medical equipment associated with your joint replacement surgery is not covered through Manitoba Health. It is an excellent idea to explore your own medical equipment coverage in preparation for your surgery. It is your responsibility to obtain all prescribed equipment for your recovery. Many insurance plans (Blue Cross, Manulife, Canada Life, etc.) and third-party payers (Veterans Affairs, WCB, MPI) cover part or all the cost of the medical equipment if recommended by a health care professional. Check with your insurance plan before your surgery to find out what is covered and who (physiotherapist, occupational therapist, surgeon) would need to sign the equipment prescription for your insurance claim. If you are covered under Non-insured Health Benefits (NIHB), or Employment and Income Assistance EIA and having your surgery at Concordia Hospital, please call the JRRC prior to surgery at 204-661-7307 so they can apply for your equipment on your behalf. Please reach out as soon as you know your surgery date. For NIHB you will need your 10-digit treaty status identification number. For EIA you will need your case worker's name, contact information and case number. Leaving this until the day of surgery may result in delays, so please do this ahead of time. Alternate

lower cost options for equipment in the community could include garage sales, online sources (Kijiji, etc.), thrift stores, and seniors' centers/legions. If you are obtaining equipment through these means, ensure the equipment is in good condition and suitable for your weight and height.

### **Will I Need Help at Home?**

Before you come to the hospital it is important to identify a support person who will be available 48 hours after surgery as required. A few points to keep in mind:

- You may require help with shopping, meal preparation, housekeeping and personal care.
- You will be assessed by a physiotherapist and potentially an occupational therapist during your hospital stay who may recommend Home Care services if required. If you feel you would require Home Care services prior to surgery due to your level of pain or functioning, you can contact Home Care Central Intake directly at (204) 788-8330.
- Arrange for someone to look after your home while you are in the hospital. This may include watering plants, caring for pets and picking up mail.
- Cancel or reschedule any services you do not need while in hospital.
- Have your ride home from the hospital arranged in advance. ***Discharge times can vary throughout the day. There is no set day/time of discharge. Length of stay can be as short as 6-8 hours. Once you are assessed as safe to go home, your ride should be available to pick you up on short notice.*** If family or friends are unavailable to help, you will need to contact a private agency. Make sure the vehicle has enough room for you to sit comfortably and safely in the front passenger seat.

### **Pre-Operative Assessment Clinic Appointment - (In-person visit or phone call)**

Prior to surgery, you will hear from the Pre-Operative Assessment Clinic (PAC), at the hospital where you will be having surgery. The purpose of this appointment is for the surgical team to review details relevant to your surgery. If attending in-person, please bring all medications that you are currently taking, in their original containers, including any drops, inhalers, insulin or ointments and a magazine/book/device/money for a snack/drink – the visit may be 1-4 hours in length! During this appointment, you may speak with a nurse, anesthesiologist, physiotherapist and occupational therapist.

\*\*\***Please bring** your Total Joint Replacement Checklist (Appendix 2) to your PAC appointment. The checklist can be removed to help guide you on how to prepare for your surgery and what to bring to the hospital. Please note this is for your reference and no longer needs to be signed by JRRC or PAC staff.

\*\*\* If you have a new illness (cold or flu) very close to your surgery call the PAC and let them know.

## **CHAPTER 2- During Your Hospital Stay**

When you come to the hospital the day of surgery, you will need to report to the admitting department. They will need to see your health card. Once admitted, you will be directed to the Day Surgery area. You will be asked to change into a hospital gown, removing all clothing and jewelry. The nurse and anesthesiologist will assess you and an intravenous (IV) will be started. Visitors may or may not be allowed during this part of your stay. The hospital can inform you on any visitor restrictions. You will then go into the operating room.

### **In the Operating Room**

You will receive an anesthetic (usually a spinal). The anesthesiologist may also give you sedation to make you relaxed and sleepy. Most people do not remember the operating room as the sedation affects your memory. You will wake up in the recovery room and remain there for close monitoring for, typically, 1-3 hours. An X-ray is typically done in the recovery room to confirm the new joint is in the correct position. Once you have recovered from the anesthesia, you will be taken to another step-down area for your next phase of care.

### **Post-Operative Care**

- *Bandage* – There may be a bandage over your surgical site. This dressing is usually left on for a day or two to allow the incision to heal before the dressing is changed to a reduced strip bandage over the incision. After that, the bandage will be changed as needed during the hospital stay.
- *Intravenous* – You will get fluids through an intravenous (IV) line. This will remain in place until you are finished IV antibiotics and are eating and drinking well.
- *Monitoring* – A nurse will check your temperature, blood pressure, breathing, heart rate and monitor the circulation in your leg frequently.
- *Deep Breathing and Coughing* – To help clear your lungs and prevent pneumonia, you should take 5-10 deep breaths and cough every hour you are awake.
- *Positioning and Turning* – Try to change positions frequently throughout the day. If you need help, make sure you call for assistance.
- *Diet* – you will be on a standard diet after surgery. Focus on drinking fluids regularly as your appetite may be decreased, and you should try to eat as soon as you can. If you feel sick, please tell your nurse so it can be treated.

### **Pain Management after Surgery**

Controlling your pain is a very important part of your recovery. While every effort is made to minimize your pain, it is normal to experience discomfort after surgery. There are several reasons why keeping your pain under control is important. Good pain control makes you feel better, allows you to sleep better, allows you to walk and do your exercises, and may reduce the risk of complications after surgery. It is important to remember that the medications and means by which these medications are provided are dependent on the site of your surgery as well as your individual medical history and pain levels. This section, which provides information on the different techniques and medications used, is

for information purposes only. The management of your pain will start before you enter the operating room. The anesthesiologist and surgeon will decide what is best for you. This will likely involve a combination of medications. Some medications may be injected directly around your new joint, while others may be given orally (by mouth), or intravenously (through the IV). These include local nerve blocks, continuous epidurals, and patient controlled analgesia (PCA) pumps. All these treatments are safe and very effective in controlling pain. These will be explained to you in more detail by the anesthesia team depending on which method of pain control is determined to best suit your needs.

### **What is an injection around the joint?**

Several medications are combined and injected around the joint during surgery. This can give excellent pain relief for up to 24 hours after surgery.

### **What oral pain medications (pills) will I be on?**

Your pain levels will be assessed regularly by your nurse. If you are already on pain medication before surgery, these may need to be increased or changed to meet your needs after surgery.

The medications most often given are:

- Acetaminophen (Tylenol®) – This medication can be given every four to six hours (either regularly scheduled or as needed).
- Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) such as celecoxib (Celebrex), diclofenac (Voltaren), naproxen (Aleve) or ibuprofen (Advil). These are typically prescribed to be taken twice a day.
- Opioid medications. These come in either long acting (typically taken every 8-12 hours) or short acting (taken every 2-4 hours) Examples of long acting Opioids are Hydromorph Contin®. Examples of short acting opioids are Hydromorphone or Oxycodone. These medications are taken on an as needed basis on top of the acetaminophen and non-steroidal anti-inflammatory medications mentioned above.
- Gabapentin – This medication is occasionally used and is typically taken 3 times per day.

Smaller doses of a variety of medications controls your pain better and has fewer side effects than if you just took one medication in a larger dose. You will be provided with a prescription for your pain medication prior to discharge.

### **When should I take extra pain medications?**

Do not wait until the pain becomes severe before taking extra pain medication. By taking pain medication every few hours, some medication from the last dose is still working and this gives the new dose time to take effect. Your goal is to keep your pain at an acceptable level, so you can do your exercises, get up in a chair and walk with assistance. While you are in the hospital you will have to ask for these extra pain medications.

### **What is the Visual Analog Scale for Pain?**



The pain scale helps you and your health care team stay informed of how well your pain is being controlled. You will be asked to give your pain a number on a scale from zero to ten. Zero being no pain and ten being the worst pain you could ever experience. By rating your pain with a number your health care team knows how well your medication is working and if any changes need to be made.

These medications can have side effects such as nausea, itchiness, constipation, drowsiness, disorientation. Please let your nurse know if you are having any of these side effects.

### **Will I get addicted to these pain medications?**

Research shows that addiction is uncommon in people who take pain medication short-term, for a painful condition. If you have a previous history of substance abuse (alcohol or drugs), discuss this with your care team so that your recovery can be monitored. Also, due to the POTENTIAL addictive nature of these medications, please store your medications in a safe and secure place.

### **Can I stop these medications suddenly?**

When a person takes certain types of pain medications for a week or longer, their body may adapt to these medications. If they suddenly stop taking the medication, some people may experience withdrawal symptoms such as headache, sweating and nausea. Withdrawal symptoms do not indicate an addiction but are potential side effects of opioid medications. This is primarily referring to opioid pain medications. These symptoms can be prevented by slowly reducing the dose of the drug over several days instead of stopping suddenly. As your pain decreases and your body heals, you will no longer need as much pain medication. Decreasing the amount of pain medication you take every day or every couple of days, can prevent the withdrawal symptoms. This can be done by taking 1 less pain pill every day or every couple of days until you are off all the pain medication. Weaning off pain medications once you are discharged should be discussed with your surgeon or community pharmacist. If you have pain from other medical conditions, you should discuss the control of this pain with your primary health care provider.

### **Getting Moving**

Most surgeons want their patients up and moving as soon as possible after their surgery. Therefore, the staff will get you up on the day of your surgery. Most patients will be walking as tolerated with assistance on the day of surgery. The physiotherapist will also teach you how to move in bed, get in and out of bed and how to use your walker or crutches safely. Before leaving the hospital, the physiotherapist will review stair management based on the number of stairs you require for your discharge home. It is normal to feel dizzy, nauseated or even lightheaded the first few times you are up. It is important to tell the nurse or therapist if you experience these symptoms.

## **CHAPTER 3- Discharge Home**

So long as there are no medical complications, you will be ready to return home when you can manage all your medications for discharge, you can manage all transfers safely (on/off a chair, in/out of bed, on/off a toilet, in/out of a tub/shower), you can walk the distance and perform the stairs you need to manage in your own home and you can dress yourself with minimal help or by using dressing aids.

*\*\*\*There is no longer a set length of stay after joint replacement surgery. Once the above goals are met, you will be discharged home, this could mean **the same day as your surgery** or even the next day.*

## Exercise

After your surgery you are not as active as you normally would be. For this reason, it is important to do your foot and ankle exercises (move your feet up and down at your ankles) to improve circulation and prevent blood clots from forming in your legs. With less activity you also tend to take shallow breaths which could lead to a chest infection. Remember to take 5-10 deep breaths and cough every hour when you are awake. Do a minimum of 10 foot and ankle exercises every hour when you are awake. The physiotherapist will review the exercises with you following surgery. Do not be surprised if you have difficulty with the exercises initially. Overtime, with healing and consistency, the exercises will become easier. The exercises should be completed 2-3 times per day. The **Basic Post-Op Exercises Program** is found in **Appendix 1**.

Remember – Return to activity must be done gradually. Listen to your body and modify as needed.

## Managing Pain and Swelling

Pain and swelling of the operated area and into the lower leg is normal after surgery. Both can be managed by doing the following:

- **Elevating your leg**
  - Lying: support the entire length of your leg on pillows so that your heel is above the level of your heart.
  - Sitting: support your leg using a foot stool, ottoman etc.
    - For knee patients: Keep your knee straight when elevating. Make sure there is no bending of the knee.
  
- **Cooling your joint**
  - Ice: 10-15 minutes every 2 hours **using a barrier between the ice and your skin**. You can use ice packs or frozen vegetables.
  - Cooling/Cryotherapy Unit: This unit circulates cool water through a pad applied over your joint. This option can be helpful for knee surgeries, less so for hip surgeries. Consider your options of renting verses purchasing.



## Activities of Daily Living after Joint Replacement Surgery

### Getting Into Bed

1. Sit at the edge of the bed.
2. Use your arms to pull yourself back along the surface of the bed. You know you are far enough back when the crease of your knees hits the edge of the mattress.
3. Remain sitting and begin turning your body into the bed, keep your arms behind you for support as you slide your legs into the bed. You can use a cane (as shown) or a belt/flat sheet to help lift your surgery leg onto the bed if needed.



### Positioning in Bed

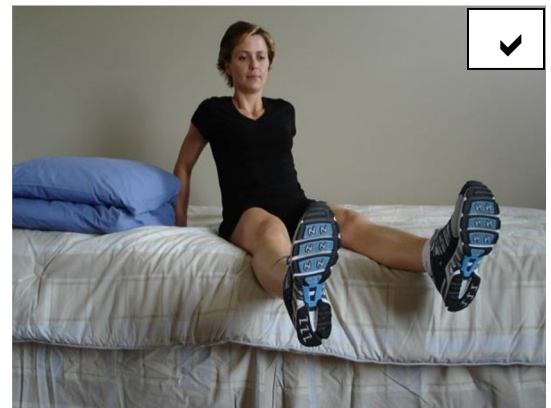
- If you want to lie on your side, use a pillow between your knees for comfort. Hip patients may require more support extending from the upper thigh to feet if discomfort is felt along the line of the incision.
- Consider using lightweight bedding for ease of positioning.



***\*Hip patients: Check with your surgeon about when you can sleep on your operated side. This position may be restricted for up to three months.***

### Getting Out of Bed

1. Push yourself up on your elbows and then up to your hands as shown below.
2. Slowly start sliding your legs over to the side of the bed.
3. Push yourself to the edge of the bed with your hands.
4. Push yourself up to standing.



***\*If getting in and out of bed is difficult a bedrail can be purchased for assistance.***

**Hip Patients: If you have "Hip Precautions" further detail regarding getting in and out of bed and positioning will be reviewed with you in the hospital.**

### Getting on and off a Seated Surface

#### **Sitting down**

1. Back up until you feel the surface against your legs.
2. Slide your surgery leg out in front of you.
3. Reach back for the armrests one hand at a time.
4. Slowly lower yourself to the surface and push yourself back so you are fully seated.



#### **Standing up**

1. Slide your hips to the front of the chair. You may want to slide your surgery leg out in front of you for comfort.
2. Place your arms on the armrests.
3. Slowly push yourself to a standing position bringing your operated leg underneath you. Do not use your walker to pull yourself up.
4. Once you are standing and have your balance, place one hand at a time on the walker.

#### **Tips:**

If a chair is too low, add a firm foam cushion or raise the furniture up from underneath with furniture risers to increase the height. When sitting, your feet should touch the ground and your knees should be at or lower than the height of your hips for ease of getting up. When possible, sit on a firm chair with armrests. This will make it easier for you to sit down and stand up. Do not sit on anything with wheels/casters

#### **Getting on and off the Toilet:** using raised toilet seat and arm bars

- To get on and off the toilet, use the same procedure as getting on and off chair. Be sure to use any equipment prescribed to you by the occupational therapist.



## Bathing/Showering

If you have access to a walk-in shower, you will likely not require any equipment to manage independently once you have been given the clearance to shower. If you will be showering in a tub environment, you may require the use of a bath seat and/or grab bars to help you get into the tub. This may be assessed for you during your hospital stay. Be sure to use any equipment prescribed to you by the occupational therapist.

### To get into the tub: Using a bath seat and security tub rail

1. Back up to the side of the tub with the bath seat behind you.
2. Reach back for the bath seat and/or grab bar.
3. Lower yourself down onto the bath seat. Push yourself back onto the seat.
4. Lift your legs over the side of the tub.
5. Reverse this method to get out of the tub.



### **Tips: Hip Patients**

Adjust the water temperature before you get in as you may find it uncomfortable to bend forward in the seated position to adjust the taps. Use a long-handled sponge to reach your legs and feet. If you have shower doors, the panels may need to be removed temporarily to allow for this transfer. You can use a tension rod to hang a shower curtain. You can also install a handheld shower head for ease of showering. You can use a cane to help get your leg in or out of the tub

### Dressing

- Dress your surgery leg first and undress it last while seated.
- Use a reacher or dressing stick for putting on your underwear and pants, if you can't reach.
- Use a sock-aid for putting on socks, if you can't reach.
- Use a compression stocking aid for putting on compression stockings if required and a dressing stick to remove the stockings.
- Use a long shoehorn for putting on shoes and taking them off.



### Driving a Vehicle- Temporary Driving restriction

If you have had a right hip or knee replacement or drive a standard vehicle, you will have a temporary driving restriction, so do not drive until approved by your surgeon. For both right and left joint replacements, DO NOT DRIVE if you are still taking narcotic medication.

#### Getting in and out of Vehicles

1. Move the seat back as far as it will go and recline slightly.
2. Back up with your walking aid until you feel the edge of the seat against the back of your legs.
3. Hold onto the back of the seat and the dashboard for support. Do not hold onto the door as it may move.
4. Sit down on the edge of the seat. Lean back and slide yourself toward the middle of the vehicle.
5. Bring your legs into the vehicle one at a time and turn your body.



To get out of the vehicle, reverse the procedure.

#### **Tips:**

Try a plastic bag on the seat to assist with turning.

Remember to remove the plastic bag once you are positioned in the vehicle. You can also use a cane to help move your leg into or out of the vehicle.

### Walking

Immediately following surgery, most patients use a walker with 2 wheels.

When using a walker:

1. Advance the walker forward.
2. Step forward with your surgery leg to the middle of the walker.
3. Lean through your hands and then step to the middle of the walker with your non-surgery leg.

As your pain decreases, you can progress to a normal walking pattern using the walker as tolerated. If you would prefer to use a 4-wheel walker or crutches, this would be assessed in the hospital before discharge to ensure this option is safe for you.

You will need to measure your walker to make sure it is the appropriate height for you. You can do this by standing tall (with good posture) relax your arms at your side. The top of the handle of the walker should be at the level of the crease on the inside of your wrist (where you wear your watch).

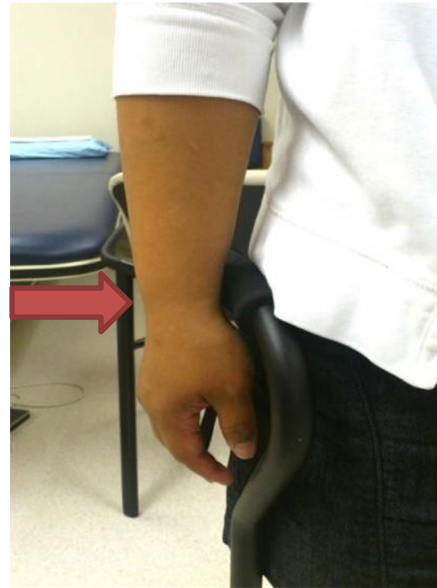


### Mobility Aid Progression

Most people will continue to use the walker or crutches for 1-4 weeks after they leave the hospital as it will provide support to your new joint, improve balance and reduce the risk of falls. You may choose to use a cane as part of your recovery. You are ready to progress to a cane if you can stand and balance

without the walker, you can place full weight through your new joint, you are putting much less weight through your hands when using the walker.

When using a cane, always hold the cane in the hand **OPPOSITE** to the surgery leg. You can ensure it is the right height by standing with the cane 6 inches out from your little toe. Standing tall (with good posture) relax your arms at your side. The top of the handle of the cane should be at the level of the crease on the inside of your wrist (where you wear your watch).



### Stairs

When using stairs following joint replacement surgery, you should have a railing or grab bar for support where there are two or more steps. If 2 railings are available and you can reach both comfortably, use both rails. If 1 rail is available, you will hold the rail with one hand and use a cane or a crutch in the other hand for support.

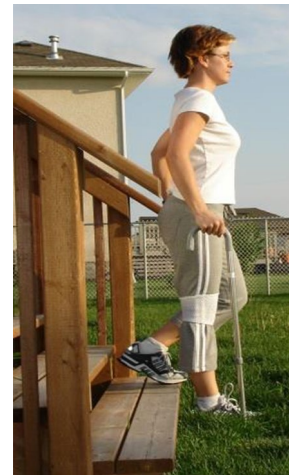
#### Going Up

- Place the non-operated (good) leg up on the stair first. Follow with the operated leg using the cane and rail for support.



#### Going Down

- Place the cane or crutch on the step below and then step down with the operated leg. The good leg will step down last using the cane and rail to support the operated leg.



**REMEMBER:** *UP with the good, DOWN with the “bad”.*

You will be able to return to a normal stair climbing pattern as your strength, range of motion and balance improve.

### **Bilateral Joint Replacements**

If you have had both hips or both knees replaced, the above strategies will work for you, but may take more time to accomplish independently. It is very important to have adequate upper body strength to be able to lift your body weight off your toilet, chair or bed to ensure you will be able to manage these movements after surgery. Please practice these techniques at home before surgery to ensure your furniture (chairs/bed) and toilet is at an adequate height to make these transfers possible. If you have any concerns about managing these transfers, please discuss them with a therapist at the Joint Replacement resource Center, a therapist in the community, or at your PAC appointment. It may be recommended that you obtain equipment to assist you, such as a raised toilet seat or overarm toilet bars.

### **Transporting Items Around Your Home**

After surgery you will be using a walker (most often a two-wheel walker) or crutches for support during walking. This means you will not have your hands free to transport items such as your meals, a phone, reading materials, etc. To help you transport these items, a walker basket or tray can be obtained from a medical vendor and attached to the front of your walker. In some cases, a small bag or pouch could be attached to the walker to carry **LIGHTER** items. A fanny pack could be used to carry small items. A backpack may be useful for larger items i.e.groceries, laundry, books. However, be sure not to overload the backpack as too much weight may cause you to fall backwards. Wearing an apron or clothes with pockets is helpful. Use covered plastic containers or a travel mug to transport food or drinks.

## CHAPTER 4- After Joint Replacement Surgery

### Care of Your Incision

*Incision Healing* – Keep the incision clean and dry. Do not apply ointment or lotion to the incision until the scar is completely closed. Increase your intake of foods high in protein and vitamin C.

*Changing the Bandage* – Your bandage should remain clean and dry. Leave the bandage on until your follow-up appointment for staple/suture removal. If the bandage becomes wet or soiled, it should be changed. If your incision has drainage on discharge, the nurse will give you specific instructions to follow.

*Staple Removal/Incision Healing* – Staples will be removed on your first follow-up appointment at approximately 10-14 days after surgery. If a different closure is used (sutures or glue), the incision healing will be checked at this initial appointment. Information regarding this appointment will be provided on discharge from hospital. For those who live outside the city, this follow up may occur with your family doctor or clinic nurse.

*Taking a Shower or Bath* – Your hospital team will provide instructions on how soon you are able to shower based on the closures used (staples, sutures versus glue), bandage provided and incision healing. Please check with your surgeon regarding how soon you can get to the bottom of the tub for bathing.

### Complications of Joint Replacement Surgery and How to Prevent Them

Every surgery has potential complications. The risk of complications following joint replacement surgery is quite low. Certain factors contribute to increased risk of complications. Chronic illness such as diabetes, heart or lung disease, and obesity increase risk of complications. A complete evaluation of your health is required before your joint replacement to determine your fitness for surgery. This will be completed by your primary care provider and reviewed with the Preoperative Assessment Clinic (PAC). You may have the opportunity to discuss any concerns with the anesthesiologist or nurse during this appointment. If complications occur, they can prolong or limit your full recovery. The next section will outline complications related to joint replacement surgery and what you can do to prevent them.

**Anesthesia:** Most joint replacements are done under spinal anesthetic. A spinal involves the injection of medication into the fluid around the spinal cord through a needle in the back. This temporarily freezes the nerves so that there is no movement or feeling in the legs or hips. Spinal anesthesia may be given with other medications through the intravenous (IV) line that make you relaxed or sleepy (sedatives).

A general anesthetic is sometimes used for joint replacement surgery. With general anesthesia, a combination of medications are administered through the IV or inhaled so you are asleep and unconscious during surgery. Complications associated with anesthesia are rare. If they do occur, they may include low blood pressure, nausea, headache, or dizziness. The anesthesiologist will discuss the best choice of anesthetic for you and possible complications related to it.

**Infection:** After joint replacement surgery there is a chance of developing an infection. Often this is just a mild skin infection. In some cases, a more serious infection within the joint may occur, which could require prolonged antibiotic treatment or further surgery. Typically, an infection develops within the first two weeks after surgery. People at a higher risk for infection are those who are elderly, overweight, malnourished, have chronic illness or taking certain medications. How you can help prevent infections:

- ✓ Get your immune system strong by eating healthy foods before and after your surgery.
- ✓ Wash your hands frequently. Ask all your visitors to wash their hands.
- ✓ Carefully follow the instructions for care of your incision.
- ✓ Avoid people who are ill with a cold or infections.

If you suspect you have an infection (e.g. sore throat, infected cut, bladder infection, boils, etc.) a few days before surgery, you must notify your surgeon's office. Infections in other areas of the body can spread to the new joint.

*Signs of an Infection* – Inspect the area around your incision daily as best as possible. Do not remove the bandage to do this. If you notice any of the following signs of an infection, you should call your doctor immediately:

- Increasing pain in the joint that is not relieved with rest, elevation and pain medications.
- Redness, swelling and warmth to the incision.
- Yellow, cloudy, or foul-smelling drainage from the incision.
- Fever, chills or flu-like symptoms.

Antibiotics are given in the operating room to prevent infection. Your surgeon may prescribe additional antibiotics post operatively if you develop signs of an infection. In some cases, other complications such as bladder infection or lung infection will occur as a result of surgery. These mild infections are treated with antibiotics and resolve quickly if identified early. It is important to let your surgeon know if there are any signs of infection.

**Other Infections:** If you develop an infection anywhere in your body, ensure it is treated promptly to avoid the infection from traveling to your new joint. It is important to report your joint replacement to all medical professionals as it may impact other procedures.

**Lung Problems:** Complications of the lung can be serious. Fluid in the lungs or pneumonia may occur due to a general anesthetic and prolonged bedrest. To prevent lung complications after surgery it is important for you to:

- Not eat anything after midnight the night before surgery. Clear fluids are permitted up to 4 hours prior to your scheduled surgery time. Any medications you were instructed to take the day of surgery may be taken with a small amount of water.
- Get up and move often. The physiotherapist will let you know when you are safe to get up and walk on your own after surgery. Change your position in bed frequently.
- Take 5-10 deep breaths and cough every hour that you are awake.
- Stop smoking! People who smoke are at a greater risk for lung complications.

**Blood Transfusion:** Bleeding normally occurs with any operation. Approximately 1 in 100 people will require a blood transfusion after their hip or knee replacement surgery. Blood transfusion is more likely to occur in patients with small stature or patients with low blood levels (anemia) prior to surgery. All patients have their hemoglobin checked prior to surgery so that issues can be addressed preoperatively. All surgical patients are invited to contact Blood Management Service (BBM) to discuss risks of transfusion and potential alternatives. Call 204-926-8006 for more information or visit BBM @ <https://bestbloodmanitoba.ca/>

**Delirium:** Temporary confusion or agitation can occur after surgery, but it is more common in older adults. Some causes of delirium are lack of sleep, pain, infection, alcohol or drug withdrawal, low oxygen levels and side effects of some medications. It is important to let the health care team know if you have had delirium in the past. You should limit your alcohol intake for 6 weeks prior to surgery. Please discuss alcohol intake guidelines with your surgeon.

**Deep Venous Thrombosis (DVT):** AKA blood clot. Blood clots can develop in the deep veins of your legs during the surgery. The danger in having blood clots is if the blood clot became dislodged from the large vein in the leg and travelled to the lung which is then called a pulmonary embolus (PE). Symptoms of PE are sudden onset of shortness of breath often with chest pain. This is considered a medical emergency. There are ways to prevent DVT. One or more of the following might be applicable to you:

a) Mobilizing: Moving frequently helps to improve circulation so that blood is less likely to clot in the legs. You should try to move your legs around every hour while you are awake and walk frequently throughout the day.

b) Sequential Compression Devices (SCDs): These are inflatable sleeves that are worn on the lower limbs and function with electricity. The sleeves inflate and deflate to promote blood circulation in the legs while in bed. They may be worn for the first 24 hours post-operatively in the hospital.

c) Blood Thinners: Blood thinners decrease the thickness of the blood which makes it harder for clots to form. The surgeon will determine which type of blood thinner is best for you based on your medical history and other medications you may be taking. You will receive a prescription for this from your surgeon.

### ***Signs of Blood Clots***

You should seek immediate medical assistance if you experience the following symptoms as they may indicate a blood clot and require treatment:

- ! Increased pain, swelling, redness and tenderness of the leg ***that does not improve with rest and elevation.***

If the clot has moved to your lungs or heart, you will experience the symptoms below. This should be

treated as a **medical emergency and you should go to the nearest emergency department or call 911:**

**! Sudden sharp pain or tightness in your chest or shortness of breath.**

**Cardiovascular Complications:** As with any type of surgery, there is increased stress on the body's circulatory system. High blood pressure, diabetes, obesity and advanced age are risk factors for increased cardiovascular complications. Getting in shape before surgery will improve your cardiovascular fitness and reduce the chance of complications. The overall rates of complications including heart attack, stroke, pulmonary embolism and deep venous thrombosis are less than 1.5%.

**Constipation:** This is very common after surgery. Constipation can be caused or worsened by several factors: opioid pain medication, lack of activity/exercise/movement, diet changes, inflammation, stress, anxiety, depression, dehydration, and underlying medical conditions. It is important to recognize constipation and address it as soon as possible.

**Hematoma:** Bleeding (hematoma) may occur in the muscles around the joint following the operation. Signs of a hematoma include increasing swelling or bruising to the operative site. It can increase the risk of infection, but often resolves over time. In some cases, a hematoma may require a trip to the operating room to drain the excess blood that has accumulated under the skin.

**Fractures:** The thigh bone may fracture (break) during insertion of the prosthetic joint. This is more commonly seen in revision surgeries. If this does occur, it is usually recognized during surgery and is treated immediately. If you have a fracture, there may be a period where you are not allowed to put all of your weight on your operated leg.

**Swelling:** It is normal to be slightly swollen, red and warm after surgery. This may last several months. This is different from infection which causes a sudden increase in pain, swelling and stiffness as well as fever and chills. It can take up to 24 months to reach the expected results of the surgery.

**Nerve damage:** It is possible, but unlikely, that an artery, vein or nerve is damaged during surgery. This can result in permanent numbness or weakness of part of your leg. Following knee surgery, it is common to have a small patch of numbness on the outside area of your knee. This happens because a small sensory nerve that supplies that area of skin is cut when the incision for the knee replacement is made. The numb patch will get smaller with time but usually does not go away completely. This is normal.

**Dislocation:** A hip dislocation occurs when "the ball comes out of the socket" following surgery. The risk of this complication is quite low with the highest risk immediately following surgery as the tissues are healing around the new joint. A small risk is always present after this type of operation. The signs of dislocation include sudden, sharp, severe pain and a shortened leg.

**Different leg length after hip surgery:** While every effort is made to ensure the legs are the same

length, in some cases one may be shorter than the other. This can be corrected with a shoe lift if required.

**Stiffness:** Stiffness is common in the knee joint, especially if knees were stiff before surgery. It is important to do your exercises (see Appendix 1) even if you have stiffness. Manipulation (joint stretching) may be required 2-3 months after surgery if stiffness in the knee joint persists. Additional stiffness may come from the healing of the scar (adhesions). To reduce this risk, speak to your surgeon or physiotherapist to be provided scar management techniques.

### Living with Your New Joint



#### Consulting with Your Orthopedic Surgeon

It is important that you attend all follow up appointments with your surgeon. Your surgeon will determine how often follow-ups are required. The surgeon can often detect wearing of the joint prior to you experiencing symptoms. Early detection may provide an opportunity to repair the joint with a simple revision as opposed to a more complex surgery.

If you develop any concerns related to your joint, arrange for an earlier follow-up appointment.

Symptoms that you should report to your surgeon's office include:

- ! New pain in your joint or leg that lasts more than a few days.
- ! A limp or pain with weight bearing.

#### Follow Up Physiotherapy

Following your discharge home from the hospital, you may choose to attend private physiotherapy. Patients will be directed to follow a prescribed exercise routine during their recovery at home. If you feel you need assistance with your recovery, you can access a physiotherapist privately either one on one or in a class setting. For your information, a list of private physiotherapy clinics can be found on the Manitoba Physiotherapy Association website at <https://mbphysio.org/> or the College of Physiotherapists of Manitoba website at <https://www.manitobaphysio.com/>. On the Manitoba Physiotherapy Association website, you can also find a list of physiotherapy clinics or other centers

which offer group classes for clients following joint replacement surgery.

### **Recreation and Social Activities**

It is important to return to regular physical activity after your joint replacement. The Canadian Physical Activity guidelines suggest 150 minutes of moderate to vigorous intensity aerobic activity per week in at least 10-minute bouts to maintain good health and fitness. Strength exercises are recommended on at least 2 days per week. Following these guidelines and remaining active will allow you to maintain better movement and strength in your new joint. Appropriate activities should be low impact, allow for periods of rest as needed and not cause pain in the joint. Ask your orthopedic surgeon about any sports or activities that you may wish to take part in after surgery. Based on your experience with the activity, current level of fitness and your joint replacement, your surgeon can guide you as to what activities would be safe for you to take part in as an individual following surgery. You can also see a physiotherapist in the community to after surgery to guide you.

### **Returning to Work**

Your surgeon will discuss with you when it is safe for you to return to work based on your workplace demands. If you have a more sedentary job (desk job), you may be able to return to work within a few months. If your job is more physically demanding, it may be 3-6 months before you can return to work. Concerns regarding financial income need to be considered prior to surgery. Some individuals may require modifications to their job or a gradual return to work plan. Planning with your surgeon and your employer prior to surgery will allow for a smoother transition back to work.

### **Travel/Airport Security**

If you plan to travel in the first few months after your joint replacement, you should speak to your surgeon for recommendations regarding the timeline and blood clot management. Your new joint may set off the metal detecting devices such as those in airports and some buildings. Tell the security officer that you have had a joint replacement and they may use a handheld wand over the area to confirm this. You should not require a letter from your surgeon indicating you have had a joint replacement when travelling.

### **Dental Work after Surgery**

The COA (Canadian Orthopedic Association), CDA (Canadian Dental Association) and AMMI (Association of Medical Microbiology and Infectious Disease) recommend that patients should be in optimal oral health before having joint replacement surgery and should maintain good oral hygiene and health following surgery. They no longer recommend the routine use of antibiotics prophylactically (preventative) for patients with joint replacements when undergoing teeth cleaning or a dental procedure. Your health care provider must use their judgment based on your individual health status when determining if preventative antibiotics are appropriate.

## **Appendix 1- Exercise Guide**

For a visual review of the exercises, please visit our website.

The exercises you will take part in after joint replacement surgery can start as soon as you receive this book so you are familiar with them after surgery. After surgery you may not be given all these exercises, so follow the handout given to you by your physiotherapist. These are just a list of the most common ones.

### **Glossary of Exercise Terms:**

Repetitions – the number of times you repeat an exercise

Sets – the number of times you repeat the specified repetitions in a day

## **Beginner Post Hip OR Knee Replacement Exercises**

### **1. Foot and Ankle**



Pump both Feet up and down as often as possible and frequently throughout the day.

### **2. Static Quadriceps**

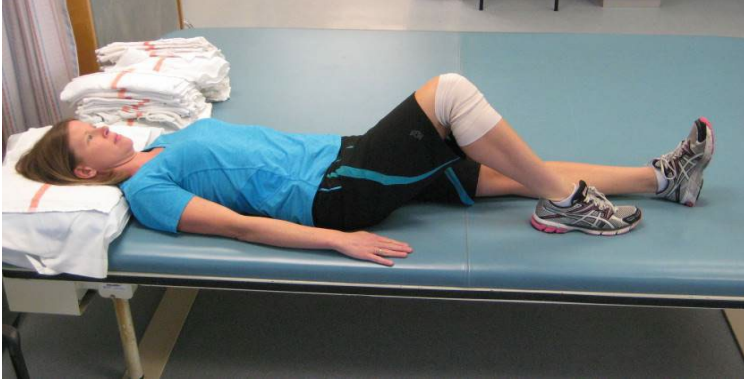
Lie on your back. Tighten your thigh. Push your knee flat down into the bed. Hold for 5 seconds. Relax. Repeat 5-10 times. Work up to being able to perform 30 Repetitions.



### **3. Static Gluts**

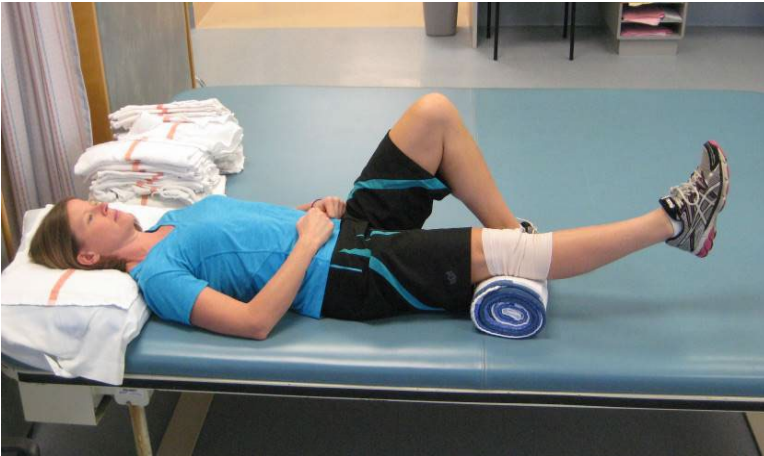
Lie on your back. Squeeze your buttocks together. Hold for 5 seconds. Relax. Repeat 5-10 times. Work up to being able to perform 30 Repetitions.

#### 4. Hip/ Knee Flexion



Lie on your back.  
Slowly bend up your knee as much as you can, keeping your foot on the bed.  
Hold for 5 seconds. Slowly Lower your leg.  
Repeat 5-10 times.  
Work up to being able to perform 30 Repetitions.

#### 5. Quadriceps over Roll



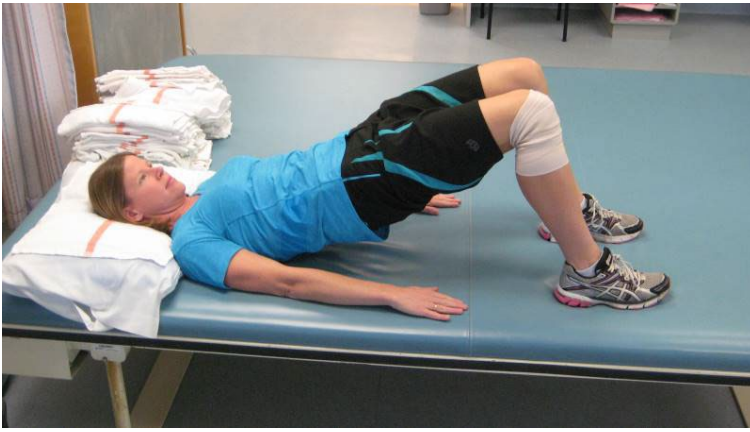
Lie on your back  
Put a 6-inch roll under your knee  
With the knee resting on the roll, squeeze your thigh and lift your heel off the bed until your knee is straight  
Hold for 5 seconds  
Slowly lower your heel back down to the bed  
Repeat 5-10 times  
Work up to being able to perform 30 repetitions  
**ADVANCED:**  
To further progress this exercise an ankle weight can be added

#### 6. Supine Hip Abduction



Place a roll between your legs to prevent crossing midline.  
Slide your leg out to the side hold for 5 seconds and slowly bring it back in again.  
Keep your knee straight and feet pointing up.  
Repeat 5- 10 times.  
Work up to being able to perform 30 Repetitions.

#### 7. Bridging



Lie on your back.  
 Bend your hips so that your feet are flat on the bed.  
 Tighten your seat muscles and raise your buttocks off the bed.  
 Hold for 5 seconds. Relax.  
 Repeat 5-10 times.  
 Work up to being able to perform 30 Repetitions.

## 8. Seated Quadriceps Extensions



Sit on a chair with your thighs supported.  
 Squeeze your thigh muscles and straighten your leg as shown.  
 Hold for 5 seconds.  
 Slowly lower your foot.  
 Repeat 5-10 times.  
 Work up to being able to perform 30 Repetitions.

### **ADVANCED:**

This exercise can be further progressed by adding a small ankle weight.

## 9. Standing Hip Flexion



Stand at your kitchen counter or to a stable piece of furniture that is approximately waist height.  
 Bend your operated hip towards your chest.  
 Do not raise past your hip level.  
 Hold for 5 seconds.  
 Slowly lower your leg.  
 Repeat 5-10 times.  
 Work up to being able to perform 30 repetitions.  
**Repeat process on your non-operated side to increase strength and balance**

### **ADVANCED:**

This exercise can be further progressed by adding a small ankle weight.

## 10. Standing Hip Abduction



Stand at your kitchen counter or to a stable piece of furniture that is approximately waist height. Keep your body straight; lift your operated leg out to the side. Hold for 5 seconds.

Slowly lower your leg.

Repeat 5-10 times.

Work up to being able to perform 30 repetitions.

**Repeat process on your non-operated side to increase strength and balance**

**ADVANCED:**

This exercise can be further progressed by adding a small ankle weight.

**11. Standing Hip Extension – Do not perform if you have Anterior Precautions.**



Stand at your kitchen counter or to a stable piece of furniture that is approximately waist height.

Keep your knee straight; lift your operated leg back, squeeze seat muscles.

Do not bend forward or arch your back.

Hold for 5 seconds. Lower your leg.

Repeat 5-10 times.

Work up to being able to perform 30 Repetitions.

**Repeat process on your non-operated side to increase strength and balance**

**ADVANCED:**

This exercise can be further progressed by adding a small ankle weight.

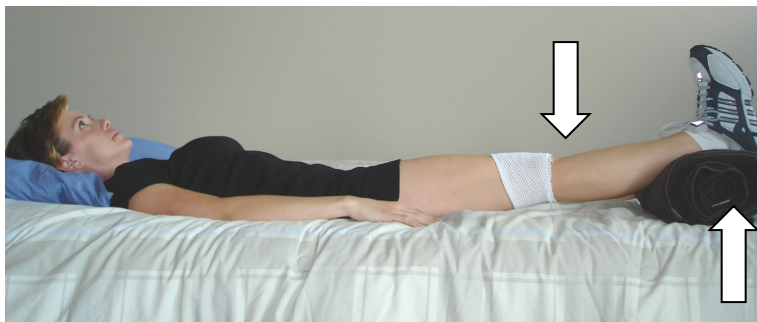
## 12. Standing Squats



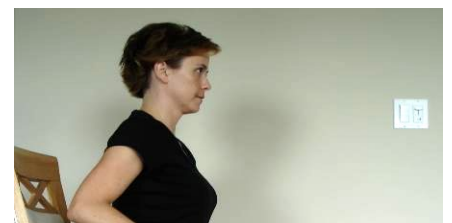
Stand at your kitchen counter or to a stable piece of furniture that is approximately waist height.  
 Keep your feet shoulder width apart.  
 Keep your back straight, bend your knees slightly.  
 Hold for 5 seconds.  
 Return to standing position.  
 Repeat 5-10 times.  
 Work up to being able to perform 30 repetitions.

### **FOR KNEES ONLY:**

Your therapist *may* instruct you to place a roll under your ankle as shown and *only* if you are unable to straighten your knee without a roll.



Lie on your back. Bend your good knee up. Keep your operated knee straight and lift your leg 10 – 12 inches off of the bed. Hold for 5 seconds. Slowly lower your leg on to the bed.



Sit in a chair.

Bend your operated knee as much as possible.

Keep your foot flat on the floor, lean back and slide your bottom forward on the chair until you feel a stretch in your knee.

Hold 20 seconds.

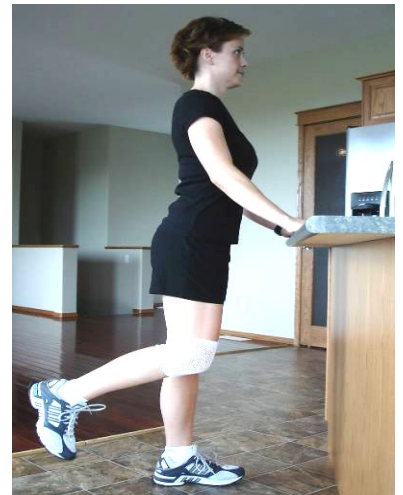
Slide hips back in the chair.

Stand holding onto a solid object.

Keep your feet comfortably apart.

Bend your operated knee bringing your heel towards your buttocks.

Hold 5 seconds. Slowly lower your leg.



Stand holding onto a solid object.

Step back with your non-operated leg.

Bend your operated knee as far as comfortable.

Keep the heel of the back leg down and your knee straight.

Keep your back straight.

Hold 5 seconds.

Change legs and repeat the exercise.



## Appendix 2

### Total Joint Replacement Checklist

#### ***What to do the day before surgery:***

Remove all jewelry and nail polish from fingers and toes.

Shower or bathe the night before surgery and/or the morning of surgery and wash the surgical area well with soap and water. Do not shave the surgical area.

Do not eat anything (includes gum, candy) starting at\_\_\_\_\_.

Do not drink anything starting at\_\_\_\_\_.

Take medications as instructed by the anesthesiologist or nurse.

#### ***Items to bring on the morning of surgery: Please label all equipment!***

Manitoba Health Card and private Insurance cards

Dentures and Hearing Aids (dentures will be removed before surgery – have a labeled container for these items).

Eyeglasses with a labeled case.

CPAP/BiPAP machine if you have sleep apnea (must be in good working order).

***Mobility Aids*** such as a walker or crutches

Case with personal items (toiletries, clothes, footwear, cell phone)

One set of comfortable clothes (i.e. t-shirt, loose shorts or pants)

Non-slip shoes or slippers (ensure they allow for swelling, closed at the heel and toe)

Specific self-care aids/dressing aids if you use them (e.g. long handled shoehorn, sock aid, reacher)

Optional: cryotherapy Unit

#### ***\*\* DO NOT BRING:***

- ⊗ Personal medications (unless instructed by the nurse or anesthetist)
- ⊗ Large amounts of money, jewelry or any other valuables
- ⊗ Medic Alert bracelets can be left at home



## Outpatient Joint Replacement Program Patient Agreement

### Remplacement articulaire en consultations externes Entente du patient

#### Living Arrangements /

#### Dispositions concernant le lieu de vie :

- |   |                          |
|---|--------------------------|
| 1. Arrangements for living space have been discussed.<br><i>Les dispositions relatives au milieu de vie ont été examinées.</i>  | <input type="checkbox"/> |
| 2. * I have removed all tripping hazards (rugs, cords).<br><i>J'ai retiré tous les objets risquant de me faire trébucher (tapis, cordons).</i>  | <input type="checkbox"/> |
| 3. * I have cleared pathways in my home for easy access.<br><i>J'ai dégagé les corridors de la maison pour y circuler plus facilement.</i>  | <input type="checkbox"/> |
| 4. * My frequently used items are within reach.<br><i>Les objets souvent utilisés sont à ma portée.</i>   | <input type="checkbox"/> |
| 5. * My chairs/seats are raised as required.<br><i>Mes chaises et autres sièges ont été rehaussés au besoin.</i>  | <input type="checkbox"/> |
| 6. * I have moved/setup a bed on the main floor, if required.<br><i>J'ai aménagé un lit au rez-de-chaussée, si nécessaire.</i>  | <input type="checkbox"/> |
| 7. * I have made sure bannisters or rail are in place and safe for use where I have two or more steps.<br><i>J'ai fait installer une rampe sécurisée aux endroits où je dois monter deux marches ou plus.</i> | <input type="checkbox"/> |
| 8. * I have made arrangements for groceries and meals following surgery.<br><i>J'ai pris des dispositions concernant l'épicerie et les repas pour après la chirurgie.</i>                                     | <input type="checkbox"/> |

#### Equipment/Functional Assessment / Évaluation des installations et capacités fonctionnelles

- |   |                          |
|---|--------------------------|
| 9. Bathtub/Shower and toilet transfer techniques have been discussed and/or demonstrated.<br><i>Les techniques de transfert adaptées au bain ou à la douche et aux toilettes ont été examinées ou démontrées.</i> | <input type="checkbox"/> |
| 10. Stair management has been reviewed.<br><i>La gestion des escaliers a été examinée.</i>  | <input type="checkbox"/> |
| 11. Mobility aid assessment has been completed.<br><i>L'évaluation des aides à la mobilité est achevée.</i>   | <input type="checkbox"/> |
| 12. Equipment needs have been assessed, vendor list provided as required.<br><i>Les besoins d'équipement ont été évalués, et la liste des fournisseurs a été remise comme requis.</i>                             | <input type="checkbox"/> |
| 13. * I have all prescribed equipment in place at home.<br><i>Tout l'équipement prescrit a été installé à la maison.</i>  | <input type="checkbox"/> |

#### Medications / Médicaments

- |  |                          |
|--|--------------------------|
| 14. * I will fill my discharge prescriptions PRIOR to surgery.<br><i>Je remplirai mes ordonnances de congé AVANT la chirurgie.</i> | <input type="checkbox"/> |
|--|--------------------------|

#### Exercise/Mobility / Exercice/mobilité

- |  |                          |
|--|--------------------------|
| 15. Exercise handout provided/reviewed.<br><i>Feuillet d'exercice remis/examiné.</i>   | <input type="checkbox"/> |
| 16. * I have maintained my exercise program as prescribed before surgery.<br><i>J'ai suivi mon programme d'exercice comme prescrit avant la chirurgie.</i> | <input type="checkbox"/> |

17. \* I have crutches or a walker for discharge as prescribed.   
*J'ai prévu des béquilles ou un déambulateur pour le congé comme prescrit.*

18. \* **KNEE PATIENTS ONLY:** I have obtained and prepared a cooling unit or ice packs as instructed.   
**POUR LES CAS DE REMPLACEMENT DU GENOU SEULEMENT:** J'ai obtenu et préparé une unité de refroidissement ou des blocs réfrigérants comme on m'a demandé de le faire.

LEGEND: JRRC- Joint Replacement Resource Centre      PAC- Preadmission Clinic



## Outpatient Joint Replacement Program Patient Agreement

*Remplacement articulaire en consultations externes  
Entente du patient*

### Discharge / Congé

19. \* I have arranged for help at home with a support person spending 2 days and nights with me.   
*J'ai pris mes dispositions pour m'assurer de la présence d'une personne à la maison durant 2 jours et 2 nuits.*

20. \* I have arranged transportation home from the hospital at the designated time with:   
*J'ai pris des dispositions pour le transport de l'hôpital à la maison à l'heure désignée avec:*

\_\_\_\_\_  
FULL NAME / ÉCRIRE LE NOM COMPLET

\_\_\_\_\_  
PHONE NUMBER / NUMÉRO DE TÉLÉPHONE

21. \* I agree to be contacted by phone by a member of the health care team once discharged at:   
*J'accepte d'être contacté par téléphone par un membre de l'équipe de soins de santé après mon congé au:*

\_\_\_\_\_  
PHONE NUMBER / NUMÉRO DE TÉLÉPHONE

I agree to complete all patient items before my scheduled surgery date.  
*En tant que patient, j'accepte de faire tous les préparatifs requis avant la date de chirurgie prévue.*

\_\_\_\_\_  
PATIENT SIGNATURE / SIGNATURE DU PATIENT      \_\_\_\_\_  
YIA YIA YIA YIA      PRINTED NAME / NOM EN LETTRES MOULÉES      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M

### Joint Replacement Resource Center / Centre de ressources sur la hanche et le genou

\_\_\_\_\_  
PHYSIOTHERAPIST SIGNATURE / SIGNATURE DU PHYSIOTHÉRAPEUTE      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M      PRINTED NAME / NOM EN LETTRES MOULÉES      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M

\_\_\_\_\_  
OCCUPATIONAL THERAPIST SIGNATURE / SIGNATURE DE L'ERGOTHÉRAPEUTE      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M      PRINTED NAME / NOM EN LETTRES MOULÉES      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M

### Preoperative Assessment Clinic / Clinique d'évaluation préopératoire

\_\_\_\_\_  
NURSE SIGNATURE / SIGNATURE DE L'INFIRMIÈRE      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M      PRINTED NAME / NOM EN LETTRES MOULÉES      \_\_\_\_\_  
D/J/DJ/M/M/M/M/M/M/M/M/M/M/M/M

***The WRHA Joint Replacement Resource Centre would like to acknowledge the valuable contributions made by the following:***

***Vancouver Coastal “Before During and After Joint Replacement Surgery”, 2007***

***Revision in 2007, 2014, 2017, 2021 by WRHA Surgery Program***

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Lorena Thiessen	Louise Campbell
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**Revision in 2024**

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Revision in 2025

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