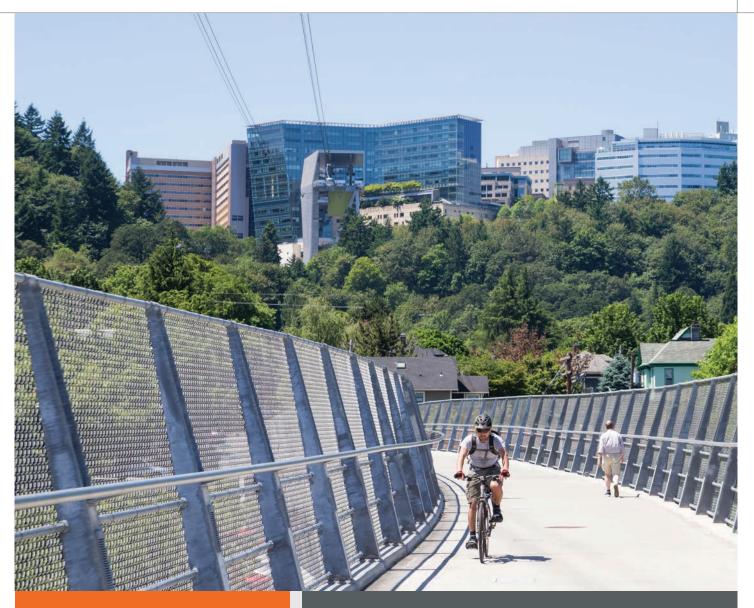
Joint Surgery Guide



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Thank you for choosing OHSU for your joint surgery.

OHSU is an academic health center. That means every member of your health care team is dedicated to providing you with care built on innovation, education and clinical expertise. Our doctors focus first and foremost on your treatment, but they are researchers and teachers as well. They apply their knowledge to your health and pass it on to their students, who will be the next specialized care providers, researchers and teachers.

Our team looks forward to providing you with joint replacement services and wants your stay with us to be as comfortable for you as possible. We hope this guide is helpful for you and your loved ones as you plan for surgery, post-surgery rehabilitation and recovery.

General information

Everyone's experience with joint surgery is going to be different. Your surgery and recovery will depend on things like your age, overall health and the state of your joint. Your surgeon and rehabilitation team will develop a plan for your specific needs.

This guide is not meant to replace your doctor's or rehabilitation team's instructions. It is intended to introduce you to joint surgery and to address any common concerns you might have.

If you have any questions or concerns about your surgery, please be sure to talk to your doctor or anyone on your health care team.

Who is on my health care team?

Surgeons

Orthopaedic surgeons are doctors who have been trained to fix problems with bones, joints and muscles. They have years of additional surgical training to perform total joint replacement operations.

Resident physicians

Resident physicians are part of OHSU's orthopaedic surgery training program. They are doctors with several years of experience and work closely with your orthopaedic surgeon and your health care team. Your surgeon controls all protocols, decisions and the entire surgical procedure.

Physician assistants (PAs)

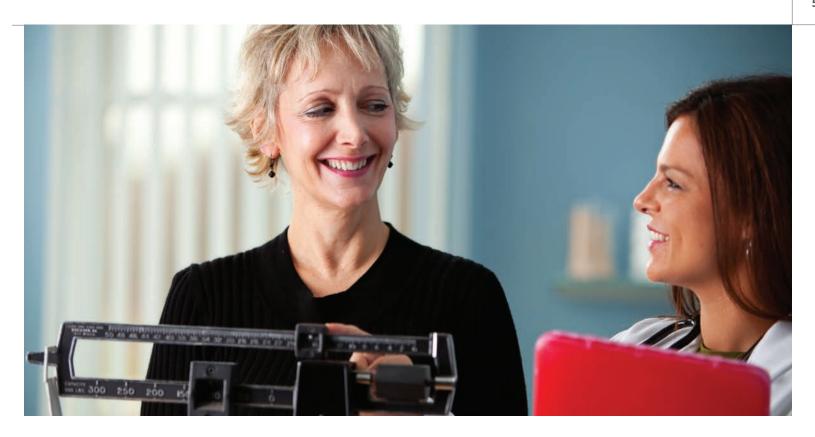
PAs work with physicians and your entire health care team. They perform examinations, order and interpret diagnostic tests and prescribe medications and therapy. They focus on education, prevention and wellness.

Nurse practitioners (NPs)

Nurse practitioners have advanced training in treating illness or injury, and can prescribe medicine and therapy. They focus on education, prevention and wellness.

Nurses

Nurses provide care in a variety of settings. They will prepare you for surgery, assist in your recovery from anesthesia and care for you after your surgery. Nurses partner closely with doctors, nurse practitioners, therapists and others to help you recover after your surgery.



Anesthesiologists

Anesthesiologists are doctors who are specially trained to provide anesthesia (the medicine to make you "sleep" during your surgery). They will go over your medical history with you and decide what type of anesthesia to use. During your surgery, your anesthesiologist will monitor you, and afterward, determine when you can be safely transferred out of the operating room.

Physical and occupational therapists

Physical and occupational therapists are health professionals you will work with closely after your surgery. Physical therapists will help you regain strength and muscle movements after your surgery. Occupational therapists will provide a treatment plan to help with your activities of daily living, such as safely using the bathroom, getting dressed and caring for yourself.

Nurse case managers

Nurse case managers are registered nurses who work with your entire health care team to help when you leave the hospital (when you are "discharged"). They can also answer questions about insurance coverage for services and equipment you may need after surgery.

My health care team

Surgeon:
Physician(s):
Physician assistant(s):
Nurse practitioner(s):
Nurse(s):
Anesthesiologist:
PT(s) and OT(s):
Nurse case manager(s):

What happens during my surgery?

HIP REPLACEMENT

The hip joint connects the upper end of your A thigh bone (femur) to the B hip (pelvis). A C "ball joint" on the end of your femur fits into the socket of the hip. Both ends are covered in cartilage (a smooth lining that protects the joint).

When the cartilage in your hip wears out, the bones can rub together, causing hip pain.

During hip replacement surgery, the worn-out or damaged cartilage is removed from the hip joint and upper thigh bone, and replaced with artificial parts. This restores the smooth surface of your hip joint and helps it move without pain.



KNEE REPLACEMENT

Your knee joint is made up of:

- The lower end of the **D** thigh bone (femur).
- The top of the **E** shin bone (tibia).
- The F knee cap.
- Cartilage (a smooth lining that protects the joint).

When cartilage wears out, the bones rub against each other and can cause pain in your knee.

During total knee replacement surgery, the worn-out or damaged cartilage is removed and replaced with metal and plastic parts. This restores the smooth surface of your knee joint and helps it move without pain.





Appointments before your surgery

You might have up to three appointments to prepare for your surgery.

These appointments are:

- A pre-surgery appointment with a member of your care team. This appointment is to discuss your surgery and answer any questions you might have.
- A pre-operative medicine testing (PMC) clinic appointment. This appointment is to evaluate your fitness for surgery and anesthesia.
- **A physical therapy pre-op appointment.** This appointment is with a physical therapist to discuss your plan for rehabilitation after your surgery.

These appointments require two to four hours total to complete. Please be sure to allow enough time for them in your day.

To prepare for these appointments:

Complete the Medication Form on page 26.
Bring this guide (including your completed forms) with you to both appointments.
Complete the Pre-operative Medicine Clinic patient screening questionnaire.

Pre-surgery appointment

Your pre-surgery appointment is very important to the success of your surgery.

What to expect during this appointment:

- We will ask you about your past and present medical history.
- You will have a physical exam.
- You will meet the members of your health care team, who will work closely with your orthopaedic surgeon.

This appointment is also a good time for you to ask questions you may have about your surgery, hospital stay and recovery. You may want to ask how long you will be in the hospital and what you can do to improve your recovery. It may be helpful to write down your questions and bring them with you to your appointment.

My pre-surgery questions and meeting notes				

Pre-operative Medicine Clinic appointment (PMC)

We will schedule an appointment for you with the PMC clinic 14-30 days before your surgery. Based on your medical health and current medical condition, this appointment may be completed by phone or in person and usually takes about 30-60 minutes. Your surgeon will determine the type of appointment necessary before you proceed with surgery. For your convenience, your surgeon will make every attempt to schedule this appointment on the same day as your pre-surgery appointment.

What to expect during this appointment:

You will either be seen by a nurse practitioner (NP) or a physician, who will, together with you:

- Review your medications, health history and current medical conditions.
- Discuss potential risks based on your medical health and make recommendations on how to physically prepare before your surgery (for example, if you will need to change your diet).
- Make recommendations on any medications that you take regularly.
- Instruct you on infection prevention techniques.
- Determine, based on your medical health and type of surgery, if you will need final blood work or any tests such as X-rays, an EKG or other diagnostics.
- Assist or make any necessary arrangements for you prior to your surgery.

My PMC questions and meeting notes				

Preparing at home for your surgery

Planning for your first few days at home can make coming home easier and more comfortable. The Home Safety tips on pages 29 – 30 provide helpful suggestions to prepare your home for your recovery after surgery.

Things to do two days before your surgery



☐ Arrange to have someone bring you to the hospital the day of your surgery.

Name and phone number of my ride to OHSU



☐ Ask a friend or family member to be available to bring you home from the hospital.

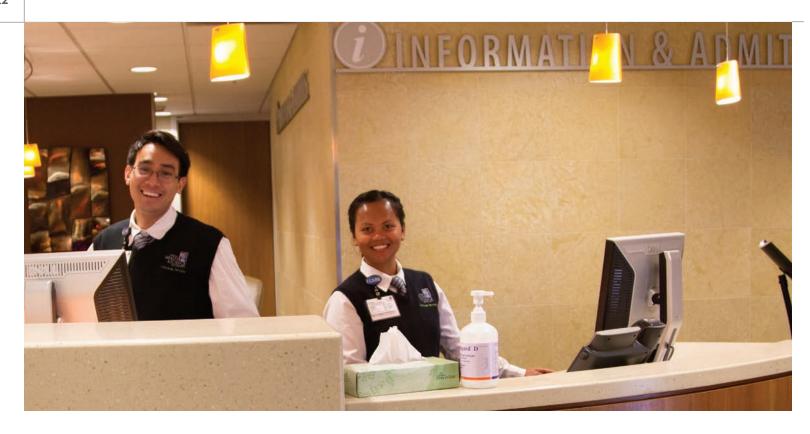
Name and phone number of my ride home



☐ Collect the items you would like to bring to the hospital for your stay. (Remember not to over-pack, since you will only be with us for a short time.) Please leave your valuable belongings at home.



☐ If you own a simple aluminum walker, please arrange for someone to bring this to the hospital on your first post-operative day. If you do not own one, we will work with your insurance company to provide you with one on the day you leave. Our physical therapy department has walkers to borrow while you are at OHSU.



The day before your surgery

A representative from OHSU will call you the day before surgery to confirm the time you should arrive at the hospital the day of your surgery.

What to bring with you to the hospital



☐ Insurance billing information



Comfortable or loose clothing for the trip home



☐ Money for any insurance copay or deductible your insurance plan requires



A copy of your
Advance Directive,
or durable power
of attorney
(if you have one)



☐ Personal toiletries, if desired



☐ Your home CPAP machine (if you use one)

The night before your surgery



Do not eat or drink after midnight the night before your surgery, unless your surgeon gives you other instructions. This is important to avoid problems during your surgery.

The day of your surgery



Shower or bathe with Hibiclens before you come to the hospital. You may be given Hibiclens at your pre-surgery appointment or you can buy it at your local drugstore. Use half of the bottle. Wash from your neck to your toes. BE CAREFUL NOT TO WASH YOUR FACE OR HAIR WITH HIBICLENS.



Men: Shave or trim your beard or mustache, as you normally would do in the morning.



Men/women: Do not shave the area near your operative site within two days of your planned surgery.



Do not wear makeup, lotions, perfume, powder or nail polish to the hospital. Nail polish can block the sensor that we will attach to your finger to measure your blood oxygen.



☐ Brush your teeth, but **do not swallow any liquid.**



Remove any body jewelry and contact lenses.

Transportation and parking

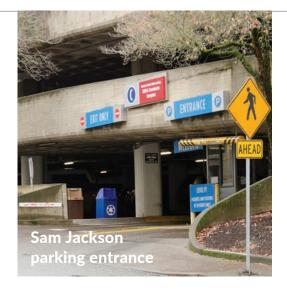
- Plan to have someone drive you to the hospital or take a cab or public transportation. You should not drive yourself to the hospital.
- Your driver may park free of charge in the following parking areas:
 - » Long-term parking in Sam Jackson Parking Garage: The entrance to this garage is on S.W. Sam Jackson Park Road across the street from OHSU Hospital (see map on page 31).
 - » Kohler Pavilion Parking Garage: As you approach the top of Marquam Hill, turn left off S.W. Sam Jackson Park Road onto S.W. Campus Drive. Turn right at the first driveway. The entrance to the Kohler Pavilion Garage will be on your right. Valet parking is available Monday through Friday, from 7 a.m. to 6 p.m. (see map on page 31).
- TriMet stops in front of OHSU Hospital. Visit **www.trimet.org** for more information.
- Local cabs provide service to Marquam Hill. Tell the driver to bring you to the main entrance of OHSU Hospital.
- Free valet parking for patients and patient visitors is offered at Kohler Pavilion and Physicians Pavilion from 7 a.m. – 6 p.m., Monday – Friday.

What to leave at home

□ Valuables such as jewelry, watch and clothing items
 □ Electronic devices such as laptops, tablets, e-readers and games
 □ Tobacco products
 □ Medications
 □ Contact lenses — they cannot be worn during surgery

Checking in at the hospital

 Arrive at OHSU Hospital at the time your doctor's office told you.







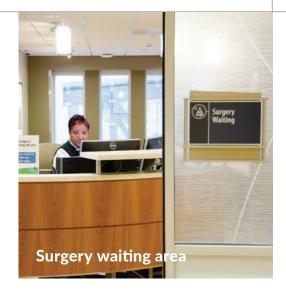
• Check in with Admitting, located immediately to the left as you enter the lobby of OHSU Hospital (ninth floor). If you need more information, please call **503-494-8111**.

Preparations for your surgery

- After you have checked in, a member of the admitting surgical staff will escort you to the sixth floor. This is the pre-operative waiting area. Only one family member may accompany you to this area.
- A nurse will take your blood pressure, temperature, heart rate, height and weight.
- You will change into a hospital gown. We will store your personal clothing.
- We will start an IV in your arm, which is how you will receive medicine during your surgery.
- You will meet your anesthesiologist, who will review your medical history with you and discuss his/her anesthesia recommendations. The recommendations may include general anesthesia, spinal nerve block/epidural or regional anesthesia such as nerve blocks.
- Once everything is clear for surgery, the surgical nurse will show your family members and/or friends where to wait and you will be taken into surgery.

Information for your family and friends

- During your surgery, family members and friends can wait in the main surgery waiting room.
- There are several coffee bars and cafes at OHSU. The cafe on the third floor of OHSU Hospital is open 24/7.
- An ATM and public restrooms are located in the main area of the hospital.
- The hospital volunteer in the surgery waiting area can provide directions to various services.
- After your surgery, a member of your surgery team will talk with your family members about the surgery and tell them the approximate time we will move you from the recovery room to your hospital room.







After your surgery

Monitoring your progress

After your surgery, the nursing and surgery teams will closely monitor you.

They will:

- Check your breathing, heart rate, blood pressure and pain level.
- Help you change positions every two hours until you are able to move on your own.
- Ask you to take deep breaths regularly using a special device to help keep your lungs clear.

Nursing staff will develop a rehabilitation plan with you to get you moving, beginning on the day of surgery.

Commonly used medical terms



Continuous passive motion (CPM): This machine is used to increase your range of motion after surgery.



IV: An intravenous line may provide fluids for blood, hydration, medication or nourishment.



Dressings: Materials that pull fluid away from surgical incisions to decrease the risk of infection.



Sequential compression devices (SCDs): These prevent blood clots and increase circulation.



Foley catheter:
A catheter is a small tube that may be inserted into your bladder and drained into a bag which collects urine.



Thromboembolytic devices (TEDs): TEDs are thick stockings that can improve circulation.

During your hospital stay

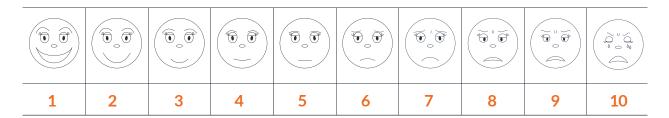
Caring for your incision

Your care team will regularly check the bandage or dressing covering your incision and will change it when needed. You may have a drain in your incision to help remove fluid and blood from the site and reduce the chance of developing an infection. Normally, we remove the drain 24 to 48 hours after your surgery.

Managing your pain

Usually oral (pill) or intravenous (IV) pain medications are used to relieve your post-operative pain. You might also have an epidural or nerve block catheter to help control pain. These options will be discussed the morning of your surgery during your pre-anesthesia appointment and a decision will be made by you, your anesthesiologist and your surgical team.

After surgery, your nurse will ask you to rate your pain on a scale of 0-10 (0 is no pain and 10 is the worst pain you can imagine) at regular intervals. It is important that you are comfortable enough to change position, cough, take deep breaths, sleep and get out of bed, as these activities are an essential part of your recovery. Oral pain medicines provide long-lasting pain control and fewer side effects such as nausea. The goal will be to get your pain controlled with pills early after surgery, since you will be discharged home with oral pain medicine.



Preventing blood clots

Surgery and lying down for prolonged periods can increase your risk of developing a blood clot in your veins (DVT or deep vein thrombosis). Getting out of bed and walking greatly helps to reduce this risk. Other important ways we prevent blood clots are to use tight stockings (TED hose) and compression sleeves (SCDs) on your legs to help circulate blood after surgery.

Medicines are also often used to help prevent blood clots. Depending on your surgery and your medical history, you may have additional risk factors for clots and may require taking an additional anticoagulation (blood-thinning) medicine. This can include aspirin, Coumadin (warfarin) or Lovenox, among others.



Rehabilitation and recovery

Physical and occupational therapists develop a rehabilitation plan with you, directed toward your goals. Your initial physical therapy plan is typically focused on the activities you need to be able to do to return home, including:

- Safely and independently moving in bed, getting in and out of chairs.
- Walking, going up and down stairs and getting into and out of the car.
- Using a walker or other assistive devices.

An occupational therapist will show you how to safely and independently perform activities of daily living, such as using the bathroom, dressing and cooking. Your occupational therapist will also show you how to use various long-handled devices, such as:

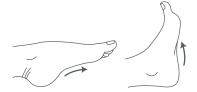
- A reacher to help you dress and pick things up from the floor.
- A sock-aid for putting on socks.
- A long-handled sponge to wash your legs and feet.
- A leg-lifting device to move the operated leg in and out of the car or bed.
- An elevated toilet seat to limit bending when using the bathroom.
- An elevated bathtub chair to fit in the shower or tub.

If you have a spouse, family member or friend who is able to closely assist you as you recover, it's a good idea to have them join you at one of your early physical and occupational therapy sessions so they can learn more about how they can best help you.

Strength-building exercises

It's a good idea to be familiar with these exercises prior to surgery.

Ankle pumps



- While lying down or sitting, point your toes as far as you can.
- Next, flex your foot up as far as you can.
- Repeat 10 times, or as many times as you can tolerate.

Quad sets



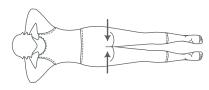
- While lying down, stretch one leg out straight.
- Squeeze the muscles on the top of your leg (your thigh muscles).
- Concentrate on pushing your knee down into the surface you're lying on.
- Hold for five to ten seconds.
- Repeat 10 times, or as many times as you can tolerate.

Heel slides



- Only perform this exercise in a pain-free range.
- While lying down, bend one knee up toward your chest while gently dragging your heel toward your torso.
- Repeat with the other leg if desired.
- Repeat 10 times, or as many times as you can tolerate.

Glute sets



- While lying down, stretch your legs out straight and squeeze your buttock muscles.
- Hold for five to ten seconds.
- Repeat 10 times, or as many times as you can tolerate.

When it's time to go home

Most people who have had joint surgery are ready to go home or to a rehabilitation center one to three days after surgery.

Your plan for discharge will be part of the discussion with your physical therapist and your doctor before you have surgery.

We encourage you to have a family member or friend available to be part of your discharge from the hospital and at your early physical and occupational therapy appointments: It's important for them to understand how best to help and support you when you are home and may need assistance.

Recovery at home

How to care for the area around your surgery (the "incision")

- Keep your incision clean and dry. If it gets wet, pat it dry; do not rub. Do not put any creams or ointments on it.
- You may shower when there is no drainage from your incision.
- If your incision has drainage fluid, you may place a dry dressing over the incision. Change the dressing twice daily and as needed. If there is no drainage, you do not need a dressing.
- If you have steri-strips (white strips across your incision), leave them in place. They will fall off on their own.
- Do not wear tight clothing that rubs on your incision.
- No tub baths. Do not soak the incision in water: This includes swimming or using hot tubs.

Check your incision daily, and call the doctor if:

- There is an increase in redness or swelling.
- The edges of the wound begin to separate.
- ! There is any change in the color of the drainage from your wound (for example, yellow, green or foul-smelling drainage).
- You have an increase in tenderness around your incision.
- There is any red streaking.
- 1 You have a temperature greater than 101 degrees Fahrenheit.

Physical rehabilitation

If you and your surgeon have discussed going to a rehabilitation center to help you manage with your new joint, those arrangements will be made by our nurse case manager, working with your insurance provider, and will be discussed with you and your family.

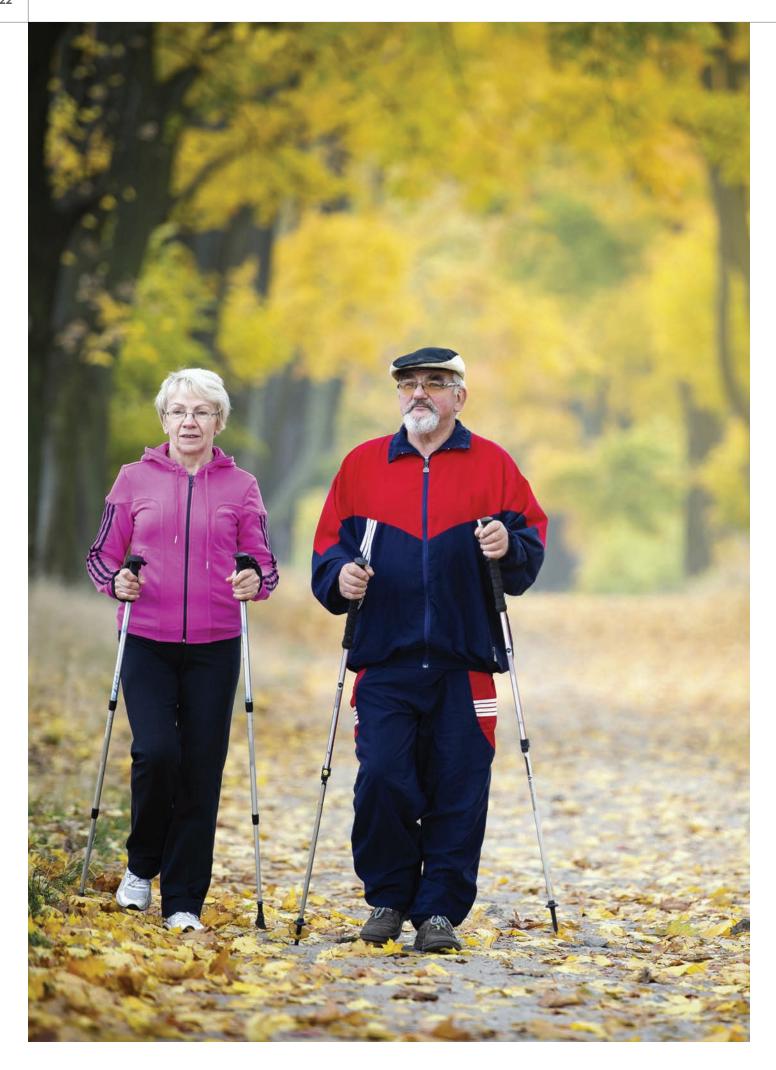
Outpatient physical therapy

Your surgeon may recommend going to outpatient physical therapy. This could occur directly after you leave the hospital, or a decision may be made at your follow-up visit about how to proceed. Outpatient therapy is an important part of your recovery process to ensure the best possible recovery.

Activity

- Maintain range-of-motion and weight-bearing limitations given to you during your hospital stay.
- Gradually increase your
 activity daily. Follow your
 physical therapist's activity and
 exercise program, as well as any
 restrictions. Walking is always
 recommended; small walks several
 times a day is ideal.
- Perform the strength-building exercises three times a day.
- Plan for rest periods.
- Ice and elevation may help reduce pain and swelling to your affected joint.
- No driving while on pain medications that may affect your ability to drive safely. No driving until cleared by your physician.





After hip replacement surgery, you will have specific precautions to follow while you heal.

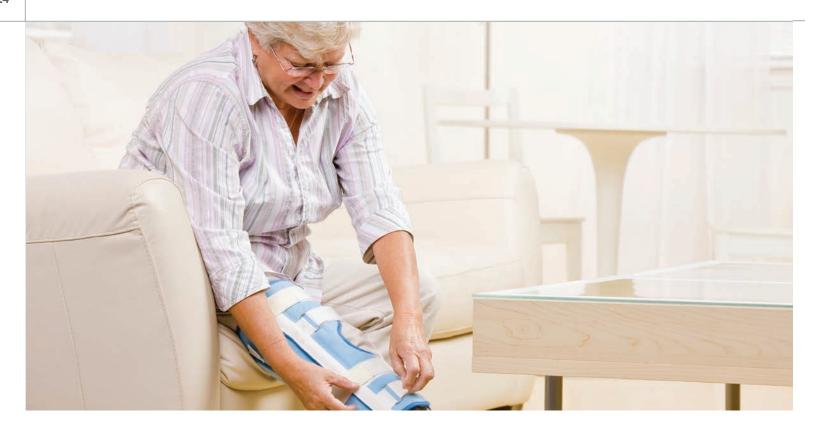
Hip replacement

If you've had an anterior hip replacement:

- Do not extend your leg backwards.
- Take small steps.
- Do not turn your foot outward.
- Keep your operative leg in front of your nonoperative leg when you are standing or getting out of a chair.
- Put a pillow between your legs when you are in bed.
- Keep both feet flat on the floor when sitting.
- Keep your knees and toes pointing forward.
- Avoid sitting in the same position for longer than
 60 minutes at a time.
- Always sit in a chair that has arms.
- You should not bend over to pick up items from the floor.

If you've had a posterior hip replacement:

- Do not bend your hip past 60 degrees.
- Use a reclining wheelchair.
- Keep your operative leg extended when sitting.
- Do not use a low wheelchair or a standard toilet: Use seat raisers.
- Avoid sitting in the same position for longer than
 60 minutes.
- Do not lean forward when sitting in a chair.
- Do not cross your legs.
- Keep a pillow in between your legs while in bed and/or turning.
- Do not turn your leg or ankle inward.
- Keep your toes and feet pointed forward.
- Do not bend over to pick up items off the floor.



Knee replacement

- Walking is one of the better kinds of physical therapy and is good for muscle strengthening. However, walking does not replace the exercise program you were taught: Continue to do your physical therapy exercises.
- If you have a brace or splint, wear it as directed by your doctor, nurse and/or physical therapist.
- Bear weight and walk on your leg as much as is comfortable.
- When lying on your side, you may find it more comfortable to place a pillow between your legs.
- You may use ice for pain and swelling. After 48 hours, if your knee is no longer swollen, hot or painful, you may use heat to help increase your range of motion.
 Do not use ice or heat for longer than 15 20 minutes every hour.

Important phone numbers

Department of Orthopaedics and Rehabilitation	503-418-8889
Rehabilitation Services	. 503-494-3151
Pre-Medicine Clinic	. 503-494-1100
OHSU Operator	. 503-494-8311
Admitting	. 503-418-1901
Your PCP	

SEEK HELP IMMEDIATELY if:

- You have any signs or symptoms of a blood clot:
 - Firmness, tenderness, or red or warm spots on your arms or legs.
 - You have sudden difficulty breathing or chest pain. This could be a sign of a blood clot in your lung, or a sign of an allergy to your medications.
- Your toes or fingers turn cool or blue, or if you begin to have numbness and/or tingling.
- If you fall and injure yourself in any way or notice increased pain in your new joint.

If at any time, even years after your surgery, you develop an infection like strep or pneumonia, notify your doctor. Antibiotics should be administered promptly to prevent the occasional complication of a distant infection localizing in the joint area. This also applies if you are having dental work performed. Tell your dentist or general physician that you have had a joint replacement performed.

Medication form

Please complete this medication form with all medication names, dosages and frequency. Include prescription and herbal medications. Bring this booklet with your completed form below.

Medication name	Medication name	
Dosage	Dosage	
How often	How often	
Reason for medication	Reason for medication	
Medication name	Medication name	
Dosage	Dosage	
How often	How often	
Reason for medication	Reason for medication	
Medication name	Medication name	
Dosage	Dosage	
How often	How often	
Reason for medication	Reason for medication	

How to stay healthy after surgery

A well-balanced diet is especially important after you have surgery. You should also aim to drink eight to ten glasses of water daily. Talk to your doctor if you are on a special diet.

Protein: Protein is important for tissue and wound healing. One serving of protein is three ounces, which is the size of a deck of cards. Good sources of protein include:

- Meat (beef, chicken, turkey, pork).
- Fish.
- Eggs (the whites of the eggs contain most of the protein).
- Dairy products (cheese, milk, yogurt).
- Vegetarian sources (legumes, nuts, tofu).



Carbohydrates: Carbohydrates are your body's preferred source of energy. There are two forms of carbohydrates: simple (honey, sugar, juice) and complex (bread, fruits, grains, vegetables). Whole grains are best for you: For example, choose whole wheat bread over white.



Fat: Although it's best to consume fats in moderation, your body does need a certain amount of fat to function. Essential fatty acids store energy and protect your body's organs. There are two types of fats: saturated and unsaturated. Unsaturated fats tend to be liquid at room temperature and are healthier.





Avoid alcohol until you are no longer taking your pain medication.



Avoid smoking: Tobacco/nicotine use of any kind increases the risk of major problems after surgery such as infections or blood clots.

Pain medication and decreased activity level can lead to constipation. To avoid this, eat a high-fiber diet and increase your fluid intake. Foods with high fiber include whole grains, fruits, beans and vegetables. You should have a bowel movement within three days of surgery. You will be sent home with a prescription for stool softeners. If you have tried these and are still unable to have a bowel movement, call your doctor.









Pain medicine

Your doctor will give you a prescription for pain medicine when you are ready to go home from the hospital. You will receive instructions to gradually reduce the amount of pain medication you take at your first follow-up appointment.

Home safety

You may need to make some changes to your home as you recover. Make sure your home is clean and orderly before you have surgery, so cleaning won't be necessary when you return.



Remove tripping hazards

- Remove clutter and tripping hazards where you will be walking.
- Tape down loose carpet edges that stick up.
- Remove throw rugs until you recover and are more stable.
- If you have pets that tend to be underfoot, maybe have a neighbor or friend babysit your pet(s) until you recover and are more stable on your feet.



Create a clear pathway between the bedroom, kitchen, bathroom and living room

- Place your chair, remote control, radio, telephone, medicine, tissues, wastebasket and water pitcher/glass in the place where you will spend most of your time while you recover.
- Arrange your kitchen so that you won't have to bend below the waist, reach or lift.



Furniture

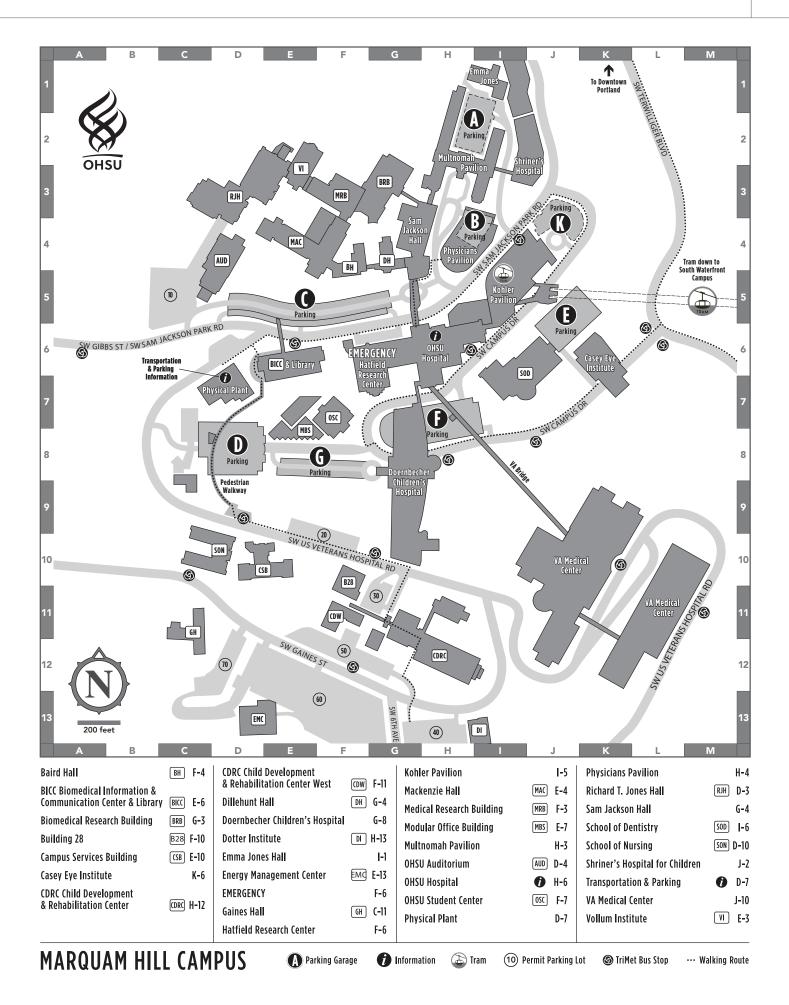
- Arrange furniture so you will have space to move around easily. You may need to move furniture so you can have spaces wide enough for a walker.
- Put a chair with armrests in each room you intend to use after surgery.
- Avoid chairs that are lower than 24 inches; trying to stand up after sitting in a low chair is difficult.
- Store away any furniture with wheels.
 All furniture must be secure so it will not roll away from you (including your bed).

You may want to move your bedroom to the main floor so you do not have to use the stairs until you are ready.



In the bathroom

- Install a handrail to help you on and off the toilet.
- Use a shower or bath chair with non-slip pads. Also, many people find it easier to sit on a shower bench and use a handheld showerhead.
- If your toilet seat is less than 20 inches high, or if you have trouble rising from your seat, you may need a raised toilet seat after surgery.
- If your bathroom is small and using a walker would be difficult, you may wish to consider a portable toilet chair (called a "commode").





Orthopaedic and Rehabilitation Services

3181 S.W. Sam Jackson Park Road Portland, OR 97239 503-494-6400 www.ohsu.edu/ortho

OHSU is an equal opportunity, affirmative action institution.

OHSU accepts most major health plans.

OHSU protects the privacy of its patients' and research participants' personal health information. If you would like a copy of the OHSU Notice of Privacy Practices, please call 503-494-8849.

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