

Your  
pathway  
to hip  
fracture  
recovery



**SSM**Health.  
Orthopedics



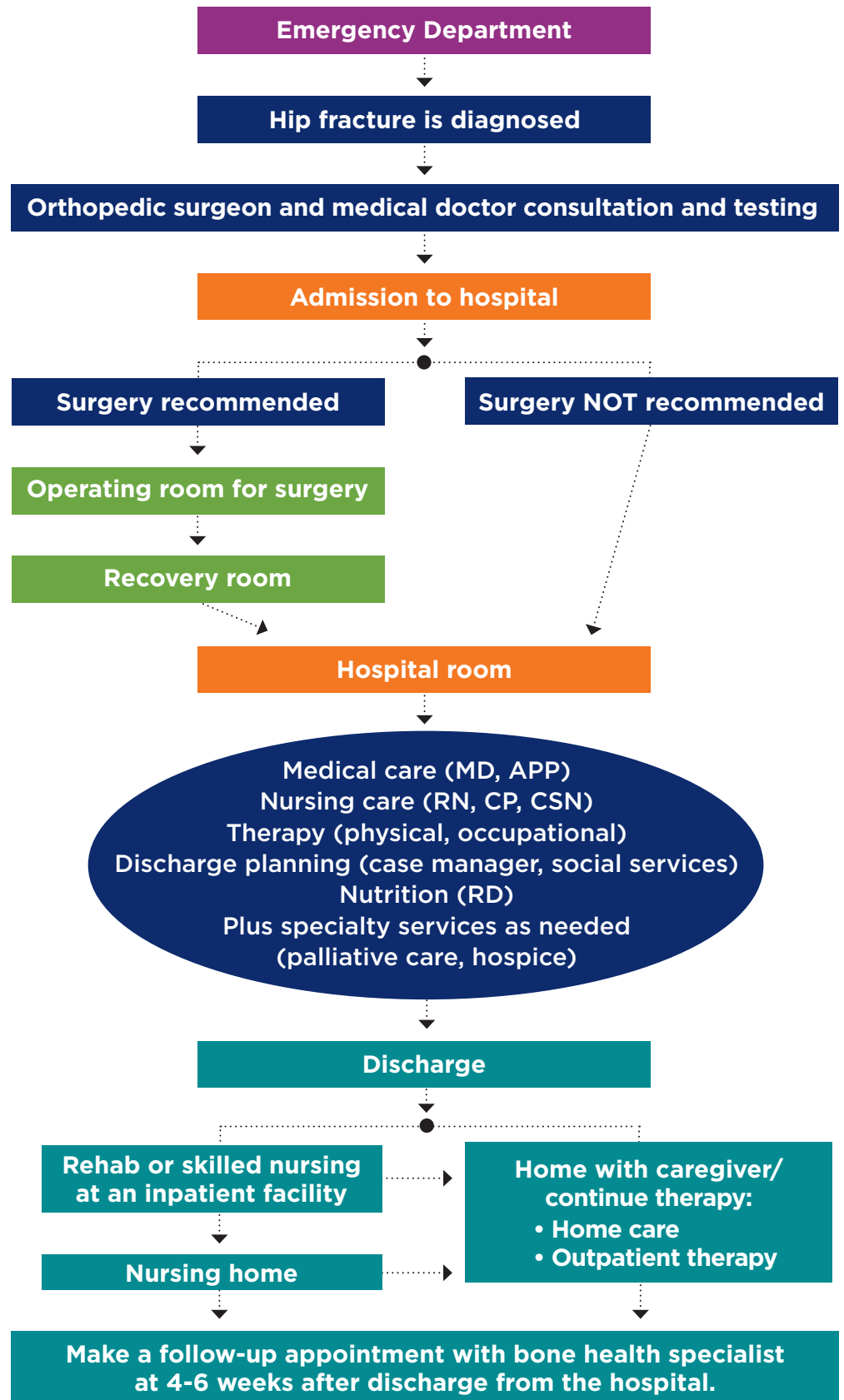
# Your hip fracture diagnosis: next steps

1. Once you have a diagnosis, an orthopedic surgeon and medical doctor will determine a treatment plan.

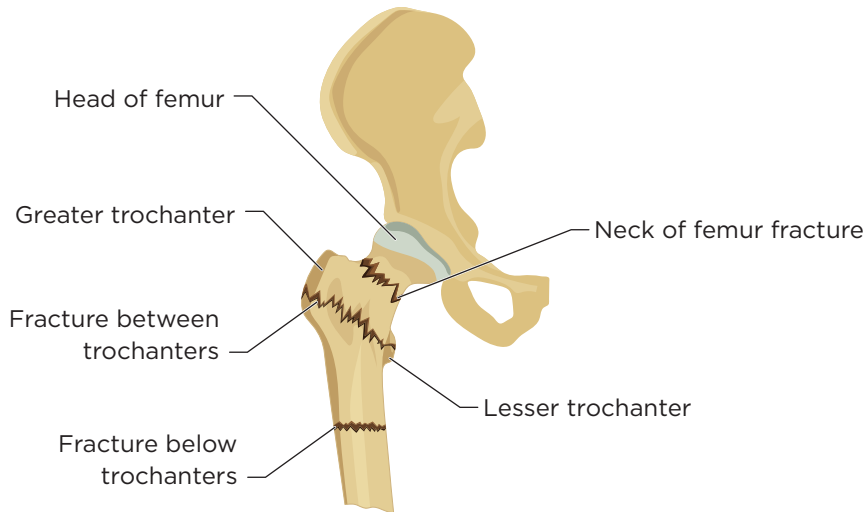
2. You will be admitted to the hospital and your care team will discuss the next steps.

3. For the next few days, specialists will provide care to help you begin recovery.

4. Care will continue after you are discharged from the hospital.

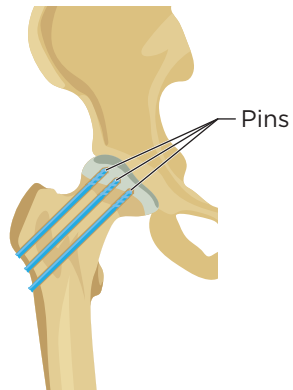


# Types of hip fractures

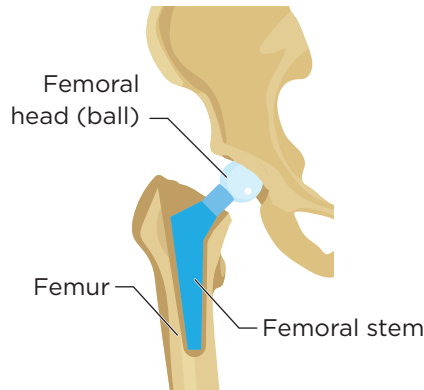


# Types of repairs: femoral neck fractures

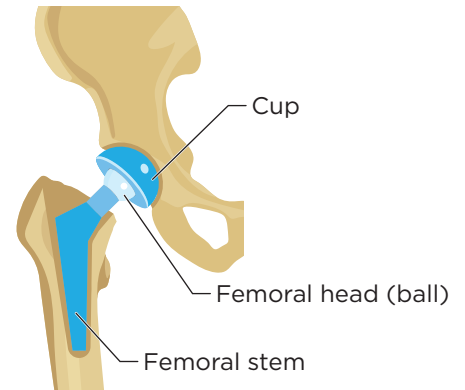
**Percutaneous pin**



**Hip hemiarthroplasty/partial hip**

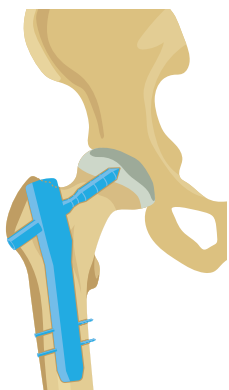


**Total hip replacement/arthroplasty**

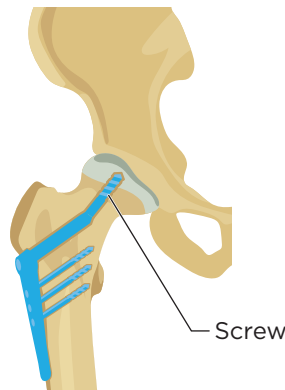


# Types of repairs: trochanteric fractures

**Intramedullary nail**



**Open reduction with internal fixation**



# Table of contents

## Contact numbers

**Orthopedic surgeon**

---

**Hospital unit**

---

**Nurse manager**

---

**Case manager/social worker**

---

**Physical/occupational therapists**

---

**Clinical nutrition**

---

**Insurance | Billing | Information**

855-989-6789

Monday - Friday, 8 am - 5 pm

Introduction ..... 1

Treatment/hospital stay .....3

Therapy ..... 8

Recovering after hip fracture .....14

Frequently asked questions.....19

Preventing future fractures.....22

# Introduction

## Help me! I've fallen and I can't get up!

Everything happens so quickly. From the sudden fall to the call for help. The pain when you try to move signals that something is really wrong. You may have other injuries or you may have hit your head in the fall which affects your thinking. Then you may realize you cannot move or get up by yourself. Help arrives to assist you with the ride to the emergency room. What happens next?

Each person has unique medical, social, and emotional needs that require the help of many health care providers. Some people will need surgery to repair the fracture, and with proper care and time to heal, they can return to normal activities. For other people, a hip fracture cannot be repaired with surgery, or surgery may be delayed because of other complications. For most people, a hip fracture is a life-altering event. Your family or caregivers will be involved to help you with decisions about where to receive care during recovery and afterward.

Your care team at SSM Health will be with you to provide a healing presence for you and your family or caregivers. They will provide care, guidance, and education to support your rehabilitation and journey to recovery after surgery.

## Your journey to recovery

In this book, we will introduce you to the care team, describe the treatment for your hip fracture and recovery, and prepare you for some of the things you may experience.

Healing after hip fracture takes time, and everyone has a different path. Your hospital stay is the shortest part of your journey and includes preparing you for discharge after a short hospital stay.

We encourage you and your family or caregivers to ask questions and to be involved in your care.

Together, we will navigate this journey with compassion and care.

## Your care team

**Anesthesiologist** – a doctor who administers anesthesia medication during your surgery

**Bone health specialist** - a physician or advanced practice provider with expertise in diagnosing, treating, and managing osteoporosis

**Case manager** – assists patients/families in developing a discharge plan through discussion with doctor, therapists, and insurance companies

**Clinical partner** – assists with vital signs, blood sugar monitoring, patient hygiene, clean linen changes, and patient care

**Dietitian** – educates patient/families on diet choices and promotes healthy recovery and wound healing

**Hospitalist** - hospital physician who oversees care in place of the primary care physician while a patient is in the hospital

**Nurse** – provides patient care and education, follows the treatment plan of the doctor, delivers medications, assesses vital signs

**Orthopedic surgeon** – a doctor who specializes in the treatment of bones, joints, ligaments, tendons, and muscles

**Occupational therapist** – assesses patient's ability to complete self-care tasks as well as safe discharge planning; educates on adaptive equipment and durable medical equipment

**Pastoral care** – provides spiritual support

**Physician assistant or nurse practitioner** - advanced practice provider who assists with the patient's care plan, treatment, and follow-up management.

**Physical therapist** – assesses patient's mobility, balance and gross motor movements, reviews exercises, educates how to safely walk, use stairs, and use adaptive devices to assist with mobility

**Social worker** – works closely with doctors and case managers to assist in discharge planning, financial resources, and community resources

**Speech therapist** – assesses language, speech, swallowing, and cognition

## What happened to me?

When you arrived for evaluation in the emergency room, an X-ray was taken to determine that you have a hip fracture. An orthopedic surgeon was assigned to you to determine how the fracture should be repaired. A hospitalist was assigned to oversee your care, and will work with your surgeon to manage your care during the hospital stay.

## What is a hip fracture?

The hip is a ball and socket joint where the thigh bone (femur) and the pelvic bone meet. Healthy hip bones can become weak with chronic illness, osteoporosis, and aging. A hip fracture occurs when one or more of the bones around the hip is broken, usually from a fall. The treatment of the fracture depends on the patient and the location of the fracture in the bone.

## How is a hip fracture repaired?

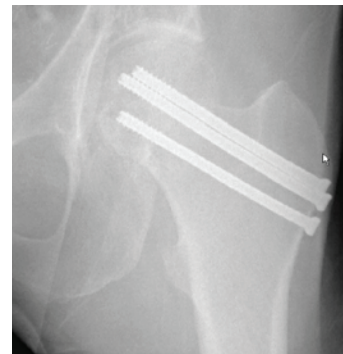
An orthopedic surgeon will discuss the best option for repairing the hip fracture. The options often require surgery to stabilize the broken bone until it heals. The motion in a broken bone causes pain.

Most hip fractures could heal without surgery, but healing would require you to stay in bed for 8-12 weeks. Doctors have learned that lying in bed for this length of time causes far more complications than the surgery to fix a broken hip, and thus surgery is recommended to nearly all patients.

The surgeon decides whether to repair the hip with a pin, a screw, or a rod and nail, depending on the extent and location of the fracture. The surgeon may choose to replace part or all of the hip joint if it is best for healing and restoration of hip movement.



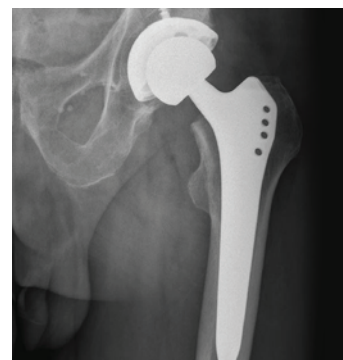
Normal hip



Fractured hip - screws



Fractured hip - rod and pin



Hip replacement

## Choose a PAL

Your surgeon recommends that you select a PAL, your Personal Assistance Liaison who is an adult family member or friend able to:

- assist you with transportation.
- stay with you at your/their home after discharge.
- help you at home with meals, errands, and other needs.
- be a contact for you during the first 90 days after discharge from the hospital.

# Treatment/hospital stay

## Preparing for your surgery

The treatment for a hip fracture begins immediately by making sure you are medically stable. Tests such as chest X-ray, blood work, and electrocardiogram may be ordered to assess your overall condition.

Your care team will tell you when you have been cleared by a medical doctor for surgery, when you are scheduled for your surgical procedure, and what the surgery entails.

- You will not be allowed to eat (NPO, “nothing by mouth”) before surgery to decrease risk of complications while you are under anesthesia.
- Your oral medication schedule may be changed, and your care team will monitor your vital signs. If you are diabetic, your blood sugar levels will be monitored and your medication adjusted.
- An IV will be placed in your arm to maintain your body fluids while you are not able to drink.
- A catheter will be placed to drain urine.
- You will sign a consent-to-surgery form, or if you are unable, a family member may sign for you.
- Members of your care team will give you a bath with special antibacterial soap to help prevent risk of infection during surgery.
- If you wear contact lenses, dentures, or hearing aids, you will be asked to remove them before your surgery.
- A member of the anesthesiology team will meet you and discuss how anesthesia will be administered during surgery.
- Surgery usually takes 1-3 hours. Your family members/friends will be directed to a waiting room while you are in surgery. The surgeon will talk to them there after your surgical procedure is completed.

## After your surgery

- After surgery, you will be taken to the Post Anesthesia Care Unit (PACU) to monitor your condition and then moved to a hospital room.
- You may experience blurred vision, dry mouth, chills, or nausea when you awaken from anesthesia. You also may have a sore throat if a breathing tube was placed in your throat during surgery.
- Family members and friends may visit with you once you are moved to your hospital room.
- Many of our SSM Health hospitals have private rooms and can accommodate one adult to stay overnight, if necessary.

## Incentive spirometer / deep breathing

- Your doctor will order breathing exercises for you after surgery.
- Bed rest, drowsiness, anesthesia, and pain can make it more difficult for you to take normal deep breaths.
- It is important for you to breathe deeply to help keep your lungs clear and avoid complications, such as pneumonia.

## Your journey to recovery

### Meals

Your nutrition is important to us. It is essential to consume a healthy diet after surgery to help with the healing process. Please ask any hospital caregiver for assistance with meals.

- We provide meals to your room. You may call the food and nutrition department using your bedside phone to order your meals from 6:30 am to 6:30 pm.
- You may order meals in advance. If you forget to order a meal, a meal tray will be delivered to your room.

- A dietitian may be consulted during your hospital stay to complete a nutrition assessment and determine the most appropriate nutrition interventions to aid in the healing process. Diet modification for other conditions (such as diabetes, heart disease, etc.) may still be necessary; however, if your appetite is poor, your diet may be adjusted to encourage intake.
- Your diet after fracture should be high in calories and protein. To meet your increased needs, you should try to eat three meals per day plus snacks or nutritional supplements between meals.
- Your registered dietitian may start a nutrition supplement for you during your stay and can offer options based on your preferences. For additional recommendations, please refer to the nutrition section on page 17.

### **Activities and precautions**

Early mobility helps prevent complications and aids the healing process.

- Our goal is for you to sit up in a chair and begin to move around as soon as possible.
- Most patients are able to get out of bed within 24 hours of surgery. Your therapy team will help you towards this goal.
- You will use a walker.
- For your safety and to prevent falls, do not get up by yourself without assistance. Call for help.
- You may have limited weight bearing and/or precautions. Your therapy team will help you learn how to take care of yourself, including how to move in bed, how to dress yourself, and how to get in and out of bed and a chair. It is important to follow these precautions as long as instructed to prevent complications.



### **Home medications during your hospital stay**

- A medical doctor will review your home medications and will determine which ones will be given to you during your hospital stay.
- Appropriate medications for you will be obtained through the hospital pharmacy.
- Some medications may look different than the medications you take at home, due to different suppliers.
- Please ask your nurse if you have any questions about your medication.

### **Pain medication and pain control**

- If you use opioid pain medication for pain control before surgery, your pain will be more difficult to control after surgery. Please discuss this with your surgeon.
- During your hospital stay, your nurse will ask you to describe your pain on a scale of 0-10.
- Our goal is to help you manage your pain, but you should expect some degree of pain after surgery. Pain levels can vary throughout the day.
- If you feel anxious or worried, your sensitivity to pain will increase. Talk to your PAL or a member of your care team to assist you.

- After surgery your nervous system is more sensitive to pain. Relaxation techniques, cold therapy, and medication reduce this sensitivity.
- **Relaxation** - pain intensity is affected greatly by mindset and circumstances (stress, distress, and coping strategies). We encourage you to create a relaxed environment (listen to calming music, read a favorite book, practice deep breathing and meditation, or use aromatherapy).
- **Cold therapy** - cold therapy is a very effective way to reduce pain and swelling after surgery and after activity. It is recommended you use cold therapy at least 20 minutes every hour while awake for the first few weeks after surgery. After two weeks, cold therapy is still suggested but you may not need it as frequently. We DO NOT advise using heat on your incision for the first few months after surgery to reduce the risk of bleeding.
- **Repositioning** - a useful technique to relieve pain is by repositioning your leg or your body until you find a more comfortable position. This can mean going for a short walk, doing your exercises, or just moving your affected extremity to a more comfortable position.
- **Elevation** - swelling can cause pain in your affected extremity. Swelling often can be reduced by elevating the affected extremity to a more comfortable position.
- Different types of medication are given based upon the degree of pain. Please tell your nurse if your pain medication is not providing enough relief, or if you don't like the way it makes you feel.
- **Opioids** (narcotics) - powerful pain medication given in pill or injection form. This type of medication may be needed the first few weeks after surgery to help with pain control. These medications are highly addictive and have many negative side effects. We will encourage you to find other methods of pain control as soon as possible to reduce the side effects of nausea, constipation, itching, and drowsiness.
- The amount and intensity of pain that a person feels differs from one person to another.
- Pain medication is best taken before your pain becomes intolerable. Ask your nurse or therapist for help with your pain.
- Opioid medications may cause itching, nausea, constipation, and confusion. We will try to minimize these normal side effects.

## Complications after surgery

Mobility reduces the risk of developing complications after surgery. Once the surgery is complete and the fracture is stabilized, your care team will start helping you to get out of bed.

You can still develop complications after surgery, so you should be aware of potential problems and the precautions to prevent them.

### Mental confusion

Suffering the effects of a hip fracture and being in the hospital place your body under a lot of stress. Unfamiliar surroundings, pain medications and the stress of the injury can lead to changes in your behavior. This is sometimes called the 'sundowner syndrome' because it seems to be worse at night. It can be frightening to you and your family.

Confusion may cause you to get out of bed without assistance, which can lead to a fall or injury. Usually the mental confusion is temporary and will go away in a matter of days or weeks.

## Pain medications

- **Tylenol®** (acetaminophen) - a safe and effective pain reliever except in patients with liver disease.
- **Anti-inflammatory medication** - this can be a pill to swallow or an injection.

The best treatments for mental confusion include:

- Familiar surroundings, familiar faces, and activity - returning to your usual environment as soon as possible is helpful.
- Redirection - mental activity such as coloring books, doll therapy, or pet therapy can help.
- Different pain medication - A change in pain medication may help to reduce confusion.

### **Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE)**

Deep Vein Thrombosis (DVT) can result from bed rest and inactivity. DVT occurs when blood clots form in the large veins of the leg. This may cause the leg to swell and become painful and warm to the touch. Another type of blood clot can appear in the lung, called a pulmonary embolism (PE), and can cause difficulty breathing.

Your care team offers many ways to reduce the risk of DVT and PE:

- **Activity** - getting up and moving as soon as possible is the most effective way to decrease risk of blood clot formation.
- **Ankle pumps** - your nurse or physical therapist will show you how to perform these exercises.
- **Sequentials** - mechanical devices to help circulate blood in your legs. These are used only while you are in the hospital and in bed.
- **Anticoagulants** - medications that are used to thin the blood to prevent blood clot formation.

### **Opioid side effects**

- **Constipation** - a common side effect of pain medications and lack of activity.

You will be given medication to help with constipation as needed.

Drink plenty of fluids and choose foods high in fiber, such as fruits and vegetables, during your recovery. See the recommendations on page 17.

- **Confusion** - It is best to take the least amount of opioid medication needed to decrease this normal side effect.
- **Drowsiness** - It is best to take the least amount of opioid medication needed to decrease this normal side effect.

### **Blood transfusions**

A blood transfusion may be needed during or after your surgery. Your blood will be drawn for testing to determine if you will benefit from a blood transfusion. If a transfusion is needed, your care team will discuss this with you.

### **Pneumonia**

Bed rest, drowsiness, anesthesia, pain medications, and pain can make it more difficult for you to take normal deep breaths, which can increase risk for pneumonia. It is important for you to breathe deeply to keep your lungs clear.

You will need to do a couple things to keep your lungs working their best.

- Getting out of bed, even to sit upright in a chair, allows the lungs to work much better.
- Sit up while you eat and drink - gravity will help with proper food/drink routing.
- Be aware - if you or your PAL notice that you are coughing frequently after drinking or eating, it is important to share this information with your care team. You could be aspirating fluid into your lungs.
- Incentive spirometer - this device is given to you in the hospital. The nurse will instruct you how to use it to assist your deep breathing.
- Breathing treatments - sometimes your hospital doctor may order breathing treatments. These treatments utilize medications to help open the air pockets in your lungs.

## Pressure ulcers (bedsores)

- Hip fractures cause pain when you move, even in bed. As a result, you tend to move less to change position than you normally would. When you are lying or sitting down, more pressure is placed on the skin in certain areas. This pressure actually reduces the blood flow to the skin by closing off the blood vessels to that area. Over time, that area of skin may be damaged from lack of blood flow. This damage is called a pressure ulcer or bedsore.
- Common areas to develop a pressure sore are your heels, hips, buttocks, and elbows. Burning pain in these areas is a sign of a pressure sore developing. Prevent pressure ulcers by:
  - Repositioning - it is important to reposition your body every hour or two, in bed or in a chair, to relieve pressure areas.
  - Using a pressure pad or special mattress if you have prolonged lying or sitting. Use a towel roll beneath the ankles to lift your heels off the bed.
  - Getting up and moving increases proper blood circulation and restores fluids and oxygen to the skin to help with healing.

## Urinary Tract Infection (UTI)

- A urinary tract infection is an infection that begins in your urinary system. Your urinary system is composed of the kidneys, ureters, bladder, and urethra. Any part of your urinary system can become infected. Signs of a UTI are odor in your urine, burning while urinating, and/or difficulty passing urine. Sometimes having a UTI can cause mental confusion.

Some ways to prevent a UTI are:

- Discontinuing the Foley catheter, if used - a catheter is placed to empty your bladder while you are waiting for surgery. Early removal after surgery will help to prevent a UTI from occurring.
- Prevent dehydration - Encourage drinking water to prevent dehydration.
- Toileting schedule - sometimes you may lose the urge to urinate due to pain and/or pain medications. Placing yourself on a toileting schedule to empty your bladder frequently will help prevent the formation of a UTI.
- Hygiene - proper toileting hygiene is important to prevent UTI.

## Infection

- Although rare, infection can be a life-threatening complication after hip surgery.
- Signs of infection include redness, drainage from the incision, fevers, chills, or an increase in pain. See page 15 for signs to call your doctor.

## Smoking policy

- Smoking increases your risk of complications, wound healing, and infection. Now is an ideal time to quit smoking to promote healing.
- To promote an optimal recovery environment for our patients, our entire hospital campus is a tobacco-free facility.
- Use of smoking tobacco, chewing tobacco, E-cigarettes or electronic cigarettes by employees, patients, and visitors, including inside and outside the hospital campus, is not allowed.
- If needed, a nicotine patch can be ordered for you during your hospital stay.

# Therapy

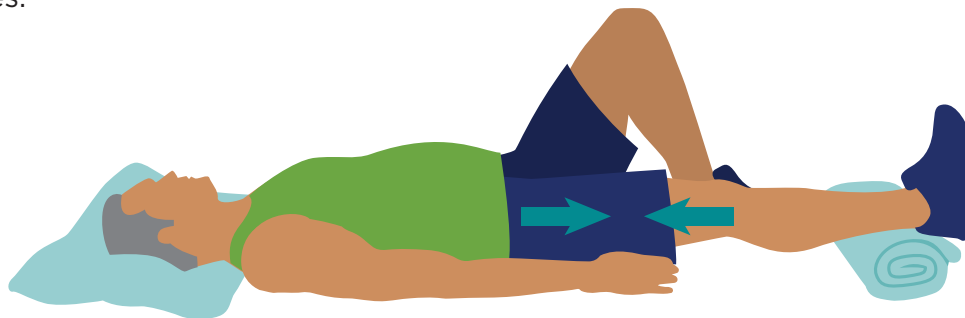
## Post-operative exercises

Strong leg muscles are key to a successful recovery. The following exercises are performed to strengthen your leg muscles and improve range of motion after surgery. Your positive attitude and dedication to these exercises will enable you to regain a more active lifestyle in a shorter period of time. Please do these exercises 3 times every day, up to 20 repetitions each. Therapists will review your exercises with you and may make changes according to your surgeon's preference.

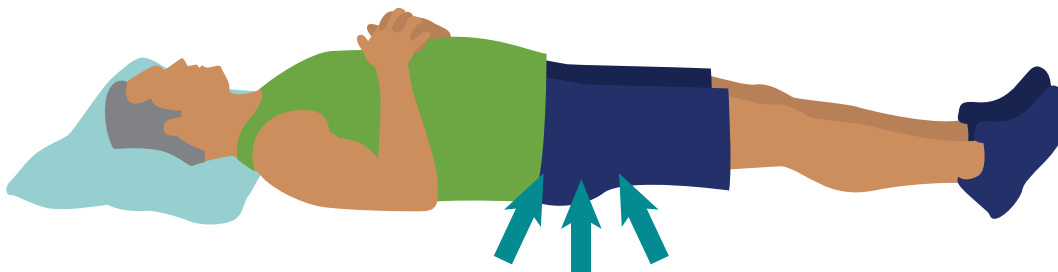
**1. Ankle pumps** – Bend your ankles up and down, alternating your feet.



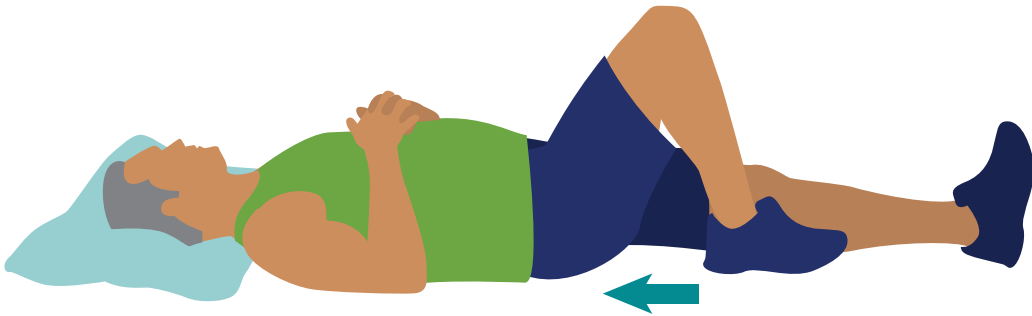
**2. Quad sets** – Lie with a pillow under the heel of your affected knee. Tighten the muscles on the top of your leg while trying to push your knee toward the floor. Hold for 5 seconds, then relax your muscles.



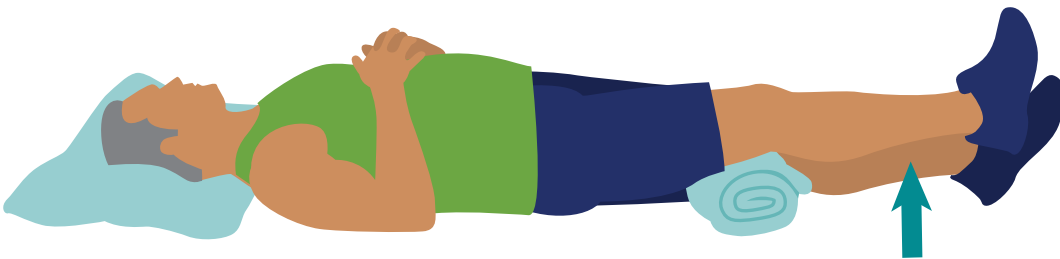
**3. Gluteal squeezes** – While lying flat, squeeze your buttocks muscles as tightly as possible while counting aloud for 5 seconds, then relax your muscles.



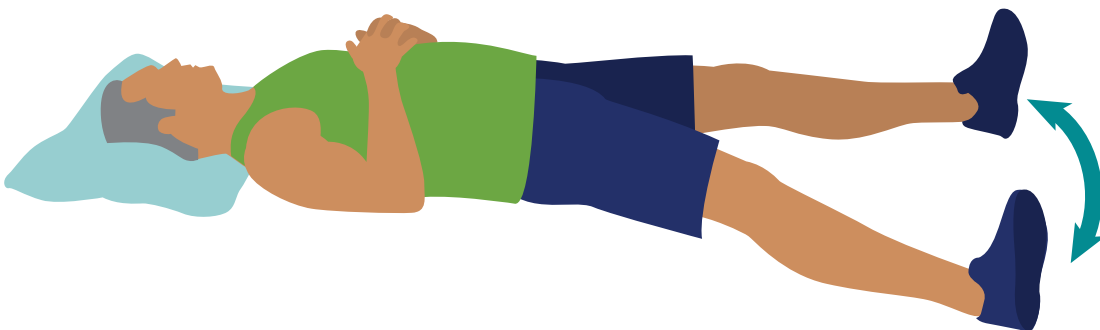
**4. Heel slides** – While lying flat, bend your affected leg and pull your heel toward your buttocks. Lower your leg slowly to the extended position, sliding your heel along the bed.



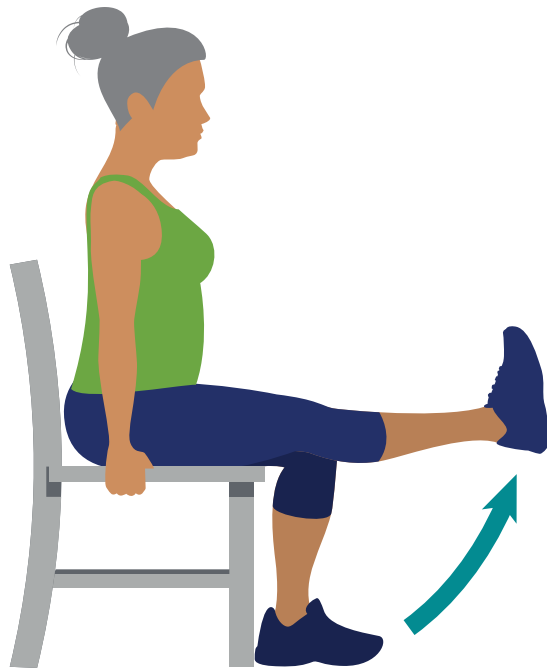
**5. Short arc quads** – While lying on your back with a rolled towel (about 6 inches wide) under your affected leg, slowly straighten your knee to a fully extended position. Hold this position for 5 seconds, then relax your muscles.



**6. Abduction** – While lying on your back, slide your affected leg out to the side. Keep your kneecap pointing toward the ceiling. Gently bring your leg back to the midline position.



**7. Long arc quads** – While sitting in a straight chair, straighten your affected leg out in front of you and hold it for 5 seconds. Slowly return your foot to the floor.



## Precautions

If you had a total hip replacement to repair your hip fracture, the hospital therapist will provide instructions about hip precautions from your surgeon specific to your hip replacement surgery.

# Walker safety

## Physical activity general instructions

1. Your surgeon will determine how much weight you are allowed to put on your affected leg. Walk slowly and carefully, putting weight (weight bearing) as tolerated on your affected leg.
2. Use your walker until your therapist progresses you to use a cane.
3. Have someone walk with you until you feel steady on your feet, especially when you go up or down steps or walk on uneven surfaces.
4. Remove loose rugs or other small obstacles from the floor which could cause you to trip or fall.

## To stand up

1. Be sure your walker is directly in front of you.
2. Scoot to the front of the surface you are sitting on.
3. Do not pull up with the walker.
4. Push up using an arm rest or solid surface to stand.
5. For comfort, place your affected leg forward and stand up on your unaffected leg.
6. When you are balanced or feel steady on your feet, place your hands on the walker.

## To walk

1. Roll the walker to a comfortable distance in front of you.
2. Take a step with your affected leg and then take a step with your unaffected leg.

## To sit down

1. Back up until you feel the surface on the back of both legs.
2. Place the affected leg forward for comfort.
3. Reach back for the armrests or surface.
4. Slowly lower to sitting, allowing the affected leg to slide forward as needed for comfort.

## To go up one step forwards

1. Walk to the step. Be sure your walker is touching the step.
2. Lift the walker and place all four legs of the walker on the step.
3. Push down on the walker with your arms and step up on the step with your unaffected leg. Then, bring your affected leg up on the step.

## To go down one step forwards

1. Walk with your walker up to the edge of the step.
2. Place all four legs of the walker on the floor in front of the step.
3. Walk your feet up to the edge of the step.
4. Push down on the walker with your arms and step down with your affected leg and then step down with your unaffected leg.

---

### Remember!

"Up with the good, down with the bad." Go up with your unaffected leg first, and down with your affected leg first.

## To go up one step backwards

1. Back yourself up to the step with your walker. Be sure your walker and your heels are touching the step.
2. Push down on the walker with your arms and step up on the step with your unaffected leg.
3. Bring your affected leg up on the step, take a small step back with each foot, then raise the walker up onto the step. The extra steps back will help you keep your balance.
4. When you reach the top, walk backwards with the walker a few steps and then turn around with the walker.

## To go up stairs

1. Put your feet close to the step.
2. Use assistive devices, if available, as instructed by your therapist, such as rails, crutches, cane, handheld assistive device, or gait belt.
3. Go up one step at a time. Lead or start with your unaffected leg first, then bring up the affected leg to the same step.
4. Proceed with remaining steps in the same fashion.

## To go down stairs

1. Place your feet close to the edge of the step.
2. Use assistive devices, if available, as instructed by your therapist, such as hand railings, crutches, cane, handheld devices, or gait belt.
3. Go down one step at a time starting with your affected leg first and then bring down the unaffected leg to the same step.
4. Proceed with remaining steps in the same fashion.

---

### **Remember!**

Go up with the unaffected leg first and down with the affected leg first.



# Car guidelines

## Getting into a car

1. On the passenger side, make sure the car seat is moved as far back as possible. You may want to recline the seat to give you as much room as possible to swing your legs into the car.
2. Stand with your back toward the car.
3. Sit on the edge of the seat, slide yourself back. (Sitting on a plastic bag may make it easier to slide.)
4. If you have extra-long legs, be sure to scoot back as far as you can.
5. Swing your legs into the car. You may need someone to help with this.

## Getting out of a car

1. Move the car seat backwards and slightly recline the seat.
2. Keeping your legs together, slowly lift both legs out of the car. You may need someone to help with this.
3. Scoot to the edge of the car seat.
4. With the walker in front of you, push up to a standing position by placing your hands on the dashboard and car seat or frame of the car.
5. Do not pull up to a standing position using the car door or walker.
6. For comfort, place your affected leg forward and stand up on your unaffected leg.
7. When you are balanced and feel steady on your feet, place your hands on the walker.



# Recovering after hip fracture

## Preparations for leaving the hospital

- You and your care team will determine the best place for you to recover after you leave the hospital. If you are cleared to go home, your PAL will need to drive you home from the hospital and stay with you.
- Some patients may require a short stay at a rehabilitation unit or skilled nursing facility after discharge. Your physician and care team will discuss your discharge plan and make any necessary arrangements. Insurance benefits do not automatically guarantee coverage for you at these facilities.

## Discharge options

**Acute rehabilitation** – intensive rehabilitation, requiring participation in 15 hours/week; you must require two therapy services; specific diagnoses are required; must require a doctor to be on site

**Skilled nursing facility** – less intensive rehabilitation, where a patient can still receive occupational, physical, and speech therapies daily

**Home health care** – if patients are ‘homebound,’ they may qualify for services including a nurse, nurse aide, occupational, physical, and/or speech therapist to visit a few times each week to provide a home assessment, exercises, etc.

## Preparations for going home

Before you return home (from the hospital or a rehabilitation facility), the therapy team will help to make sure you are ready and able to take care of yourself. You will be able to go up and down a few steps, go to and from the bathroom, and move around your house using a walker.

- You will be given discharge instructions, a list of exercises, a prescription for pain medication, and instructions on a prescription for medications to prevent blood clots.
- A home care staff member, such as a physical therapist and/or nurse, will come to your home within the first two days after your discharge from the hospital or rehabilitation facility.
- You may choose your home care company unless your insurance has any limitations. A case manager will provide a list of home care companies. After you make your selection, the case manager will contact that company to schedule your home care.
- Someone from your selected home care company will contact you to schedule your home care visits.
- Remember that good nutritional intake should continue after discharge. Continue to consume three meals per day with snacks or nutritional supplements between your meals. See page 17 for additional nutrition recommendations.

## Equipment

- When you are ready to go home, your facility care team will make arrangements for any equipment needed for your care at home. A two-wheeled walker is normally the walking aid needed after surgery. If you do not have a walker at home, one will be ordered for you before discharge. If you have a walker or you will be borrowing one, you may have your PAL bring it to your room before you are discharged from the hospital or rehabilitation facility to be sure it is fitted for you.
- An occupational therapy staff member will evaluate and instruct on use of any adaptive equipment to help with bathing and dressing.

## Care for your incision

- If your skin is closed with staples, they will be removed 13 to 15 days after surgery. A bandage is applied to protect the incision. This will be changed as needed.
- If your skin is closed with dermabond, a clear plastic dressing is applied over this glue-like substance. The dressing will come off on its own.

- Your home care team will provide instructions on dressing changes.
- You will be given instructions when it is safe to take a shower (no tub baths) after surgery.
- Do not use lotion or ointments on or around your incision until you check with your surgeon.
- If you see redness or drainage, please call your surgeon's office or notify your home care nurse.

## Swelling

- Swelling is expected after surgery, during your hospital stay, and at home when you are more active. Swelling may continue for several months.
- The most common areas for swelling are the foot, ankle, calf, knee, thigh, and hip.
- To help manage swelling, lie with your surgical leg elevated on pillows, so that your foot is higher than the level of your heart, for at least 45 minutes, two to three times during the day.
- To help reduce pain or swelling, place a cold pack on the surgical area for at least 20 minutes every hour while you are awake.

## When to call your doctor

We want to help you avoid an unnecessary ER visit or hospital readmission. Call your surgeon's office immediately if any of the following signs or symptoms occur after surgery:

- Wound concerns:
  - Increase in redness, separation, or gap along the edges of the incision
  - Drainage that is increasing, foul-smelling, an unusual color, or that continues more than 7 days after surgery
- Pain, redness, or excessive tenderness in your leg or calf
- Excessive swelling in your foot, ankle, calf, and/or thigh

- Ankle swelling that does not improve overnight
- Pain that does not improve with medication, rest, ice, and elevation
- Fever greater than 101.5 degrees
- Blood in the stool or urine
- Constipation not relieved by use of over-the-counter laxatives
- Nausea or vomiting

**All medication refills, including pain medication, will only be ordered during regular office hours.**

**Note:** Your home care nurse or therapist also can assist you. Please talk to them about any of your health-related concerns.

## When to Call 911

A blood clot in the leg can move to the lung, which can be very serious. Call 911 if you have any of these symptoms:

- Shortness of breath
- Chest pain
- Coughing up blood
- Unexplained anxiety, especially with breathing

Call 911 for any symptoms of stroke:

- Sudden numbness or weakness of face, arm, or leg, especially on one side.
- Sudden confusion or trouble speaking or understanding speech.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, or loss of balance or coordination.
- Sudden severe headache with no known cause.

## Avoid a fall with these precautions

Ask your family members or caregiver for assistance with these precautions to avoid hazards that could cause a fall after surgery.

- Clear walkways, remove throw rugs and clutter, fasten down loose carpet or flooring, move electrical and phone cords, and make sure a walker fits the space around your bed and chair.
- Make sure lighting is adequate at the entrance to your home and where you will be walking, and that light switches are accessible at room entrances and at the top and bottom of stairs. Replace light bulbs in overhead lights or lamps and place a flashlight near your bed and chair for emergency.

- Check that handrails are sturdy along stairs, and that steps are marked and clearly visible.
- If your toilet seat is low, obtain an elevated toilet seat and make sure toilet paper is within your reach. For nighttime toileting, consider using a bedside commode.
- Use a sturdy shower chair and place on top of a rubber mat in your tub/shower. If you have grab bars, make sure they are secure. Use a nonskid rug on the bathroom floor.
- Move all necessary items you will use to an area between your waist and shoulder height so you won't need to bend over, especially in the kitchen and bathroom.
- Have frozen meals or pre-cooked meals brought in to eat after you return home. Refer to nutrition guidelines on page 17.

After surgery, keep the following points in mind to avoid a fall:

- Wear supportive shoes and use your walker or assistive device as instructed. Use a walker basket or a bag to carry items.
- Avoid sitting in chairs that rock, swivel, or roll. If a seat is too low or has a soft cushion, use a firm cushion to raise the seat height.
- Use a cordless or cellular phone and keep a list of emergency phone numbers available.
- Remember, some medications can make you dizzy, drowsy, or unsteady on your feet. Take medications as directed and eat as instructed with medications. Rise slowly from sitting.

## Nutrition guidelines

Good nutrition after hip fracture is a vital part of your recovery. Inadequate nutrition after hip fracture can lead to weight loss, delayed wound healing, loss of muscle mass or strength, and increased length of hospitalization or rehabilitation. Your diet after discharge should continue to be high in calories and protein. To meet your increased needs, you should try to eat 3 meals/day plus snacks or nutritional supplements. If you are unable to eat food for a meal, drink a nutritional supplement.

## Nutritional supplements

Reduced appetite is common after hip fracture. Using nutrition supplements is a great way to increase your calorie and protein intake. Even if your appetite has returned to what is normal for you, nutrition supplements are recommended to meet your increased calorie and protein needs for healing.

- Over-the-counter supplement options include: Ensure®, Boost®, Carnation Breakfast Essentials®, Glucerna® (for diabetics), and store brand versions which can be more cost effective.
- Look for a supplement with 200-400 calories per serving. Look for “plus” versions with higher calorie and protein content.
- Drink your supplement between meals so that you are not too full to eat at your meal time.
- In general, supplements are intended for use in addition to your meals to provide the extra calories and protein your body needs to heal after fracture. However, if you are unable to consume a meal, then drinking a nutrition supplement as a replacement is an option. Always try to eat your meal first.

Refer to the section on nutrition guidelines after hip fracture on pages 22-23. If you have questions, call the clinical nutrition office phone number listed on the table of contents page in the front of this book.

## Avoiding and relieving constipation

Many factors contribute to constipation, including a sedentary lifestyle, use of pain medication, and poor nutrition. Physical activity, hydration, and a diet high in fruits and vegetables that naturally contain fiber and a high water content will assist bowel health.

Pain medications that cause constipation include: Norco® (hydrocodone with Tylenol®), Percocet® (oxycodone with Tylenol®), Oxy-IR® or Oxycontin® (oxycodone), Tylenol® with codeine, Ultram® (tramadol), and Ultracet® (tramadol with Tylenol®).

### Signs of constipation

- Bowel movements are less often than normal.
- Stools are small, dry, and hard to pass.
- Prolonged constipation can cause stomach pain, nausea, or vomiting, and feelings of confusion. Call your doctor if any of these symptoms occur.

### Suggestions to relieve constipation

- Drink at least 8 glasses of water every day (unless your fluid intake is restricted by your primary care physician).
- Increase privacy and the amount of time for toileting (up to 30 minutes).
- When you feel the urge to use the bathroom, don't hold it.
- Avoid using bulk laxatives (Metamucil®, psyllium).
- Limit foods with high fat or sugar content.
- Eat high-fiber foods to get 25-30 grams of fiber every day (e.g. black beans, All-Bran® cereal, peas, bananas).



The following medications are recommended to prevent constipation while on opioid medications:

- Take a stimulant laxative twice daily (Senna S<sup>®</sup>, dulcolax tablets, milk of magnesia, or cascara with or without Colace<sup>®</sup>). If diarrhea develops, take once a day, only at bedtime.
- Use MiraLAX<sup>®</sup> daily at bedtime. If diarrhea develops, use once every other day.
- If the above treatments are unsuccessful, try an over-the-counter rectal intervention (first, a glycerin suppository; if unsuccessful, an enema).

## Dental work after surgery

- If you had a hip replacement to repair your hip fracture, please talk to your surgeon about whether you will need to take an antibiotic before any dental work after your surgery.
- At least one week before your dental appointment, call your dentist to ask how the antibiotic should be prescribed.
- Please remember to tell your dentist or surgeon if you are allergic to penicillin as this type of drug is usually ordered before any dental procedures.

## Exercise

- Physical activity is essential for a full recovery from a fracture and return to healthy lifestyle.
- Your surgeon will tell you when you can start walking or swimming for exercise.

## Can I break another bone?

Recovery from this hip fracture is your top priority right now, but your medical doctor will want to talk to you about your bone health.

- A fracture often is the first sign that you have osteoporosis, a disease that causes your bones to weaken and be more likely to fracture.
- Fractures usually occur with a fall. Falls are the most common cause for fracture of the shoulder, wrist, hip, and ankle.

- Now is the time to educate yourself about how to improve your bone health. Proper nutrition, exercise, and supplementation/medication are important to prevent future fractures.
- See pages 22-24 for more strategies to prevent future fractures.

## Quality of life/palliative care

Palliative care is specialized medical care for people with a life-threatening condition who need extra help to relieve the symptoms, pain, and stress along with the treatment for your illness.

- The goal of palliative care is to improve quality of life for people of all ages at any stage of illness.
- The palliative care team of doctors and staff works with your care team to:
  - provide extra support to you and your family.
  - help you live each day to the best of your ability and according to your wishes.
  - offer end-of-life counseling to patient and family, if needed.

# Frequently asked questions

## How long will I be in the hospital?

- Your length of stay is determined by your physical and medical condition, pain control, and how well your skin incision is healing.
- You should expect to stay in the hospital for a few days after your surgery.
- Your physician, with the assistance of your care team, will make the decision as to when you will be ready for discharge from the hospital.
- You may need to go to a care facility for additional rehabilitation before returning home.
- When you are able to return home, your family or caregivers will receive training to help care for you at home before you are discharged from the hospital or rehabilitation unit.

## Do I need physical therapy?

- Physical therapy is important for your recovery.
- You will be seen by members of our therapy team after your operation and throughout your hospital stay.
- The therapy team will assist in the discharge planning, family training, and recommendations on equipment for home. They may recommend additional rehabilitation services after leaving the hospital.
- If you go to a rehabilitation facility, the therapy team will continue to provide education and make recommendations for your recovery.

## What is the recovery time?

- Patients heal from surgery at different rates.
- In most cases, you will need to use a wheeled walker for 4-12 weeks after surgery. Some patients will need the walker for a longer time.
- After a hip fracture, you may not be able to move around as easily as before. With effort and a positive attitude, you can get back to doing many things you enjoy.
- Most people will gradually return to their normal level of activity in 3-6 months.
- It is important to keep in mind your level of independence before your hip fracture. Your level of function with self-care tasks and mobility, as well as the assistance provided to you before admission to the hospital, will help you and your therapists set goals for you.
- It is not expected that you will reach a higher level of independence after your hip has healed than before the fracture occurred.

## How long will I need pain medication?

- It is not unusual to use some form of pain medication for a few weeks after your surgery, with the goal to take less pain medication every week as you recover.
- Your hip and leg will be sore for several weeks. Pain is a part of healing. Discomfort is expected with recovery, however, pain should lessen as your activity improves. Review pages 4-5 for tips with managing your pain without medication.

## Should I apply ice or heat to help with pain?

- Ice can be used on the injured area to help reduce swelling and pain after surgery.
- Avoid applying heat to your injured area of your leg for 3 months after surgery. You may apply heat for muscle pain on other body parts as needed, to alleviate aches and pains.

## How long will I need to take blood-thinning medication?

- Based upon your medical history, your surgeon will determine the type of medication and the length of time you need to take blood-thinning medication after surgery.

## I am constipated, what should I do?

- Many pain medications cause constipation. Review the recommendations on page 17-18.
- Drink plenty of water and eat foods high in fiber such as fruits and vegetables.
- An over-the-counter laxative can be taken for this problem. You may ask a pharmacist for recommendations.
- Sometimes, a suppository or enema may be required to relieve constipation.

## Can I sleep on my side?

- You may sleep on your uninjured side with a pillow between your knees and ankles.
- Your therapist will instruct you on this positioning. You are encouraged to ask your therapist how to move in bed safely.

## I think my leg feels longer now. Is this possible?

- Your leg length generally will be unchanged.
- This may feel awkward or unusual at first, but will feel more normal with time.

## Can I live on my own again or will someone need to stay with me?

- Your care team will discuss a care plan after discharge with you and your family. The ultimate goal is to help you return to the home environment you were in before the fracture.
- Depending on your progress with therapy and your medical condition, as well as assistance available in the home, you may be able to go home. However, if it is not safe or you do not have support at home, you may be discharged to another care facility for further rehabilitation.

## Can I go up and down stairs?

- A physical therapist will teach you how to go up and down stairs.
- Your therapy team will determine when it is safe for you to go up and down stairs at home.

## Will I have weight-bearing restrictions or precautions?

- Depending on the type of surgical repair used to treat your hip fracture, your surgeon will tell you how much weight to place on your leg and if you have any precautions to protect the hip.
- Your therapy team will educate you and your family on maintaining this new weight-bearing status and/or precautions during movement, transfers, and daily tasks.
- You will need to follow any restrictions and precautions for several weeks after surgery. Your surgeon will give you specific instructions.

## Can I take a bath or shower?

- Your surgeon will tell you when you can shower. Do not bathe or soak the incision.
- Discuss concerns about getting into a tub/shower or walk-in shower with your therapy team. They may have suggestions to assist you with transfer. A tub transfer bench or a shower chair may be beneficial for your safety.

## What equipment will I need at discharge?

- If you go home, your therapy team will assist with ordering the appropriate adaptive equipment for your discharge from the hospital, including a wheeled walker or wheelchair.
- If you go to a rehabilitation unit or skilled nursing facility, the equipment you need will be arranged for you at the time you are ready to go home.
- Your care team will assist with training and the resources to help you reach independence with using a bedside commode, raised toilet seat, shower chair and tub/transfer bench, and with self-care tasks such as using a reacher, shoe horn, and sock aid. These items may not be covered by insurance, so the care team will determine which aids will be most beneficial for you.

## I feel depressed, is this normal?

- It is not uncommon to have feelings of depression after surgery.
- Feelings of depression may be caused by a number of things, such as limited mobility, discomfort, increased dependency on others, and medication side effects.
- As you return to regular activities, feelings of depression typically decrease.
- If you feel your depression is not improving, talk to your primary care physician.
- Call **800-273-TALK (8255)** for someone to talk to about your feelings of depression.

## Can I drink alcoholic beverages during my recovery?

- If you are taking a blood-thinning medication, you should avoid alcoholic beverages because it can change the effect of this medication.
- Avoid alcohol if you take opioid pain medications.

## I have difficulty sleeping (insomnia), is this normal?

- Difficulty sleeping is a common complaint after hip surgery, and can be a side effect of pain medication. You may take an over-the-counter sleep aid as long as you are not allergic to it.
- Use caution if taking pain medication and a sleep aid as they may intensify the effect.

# Preventing future fractures

## Steps to avoid future fractures

Recovery from fracture should be your first priority, but your doctor will want to educate you that certain fractures often are a sign of osteoporosis. Research indicates that any fracture puts you at a higher risk for future fractures. Osteoporosis, or porous bone, is a disease indicating low bone mass. This makes bones fragile and more likely to break, and often are the reason you suffered a broken bone.

### Strategies to reduce your risk of fracture

Now that you have had a hip fracture, you may have a diagnosis of osteoporosis. We recommend a follow-up appointment in the Bone Health Clinic to take steps to improve your bone health and reduce the risk of a future fracture.

### Osteoporosis evaluation

You should make an appointment with a specialist in the Bone Health Clinic to be evaluated for osteoporosis.

- A bone health specialist will evaluate your medical history and overall bone health to determine the best treatment for you.
- A bone health specialist may recommend blood work and a bone mineral density test. A BMD test assesses bone health and can identify osteoporosis, determine fracture risk, and measure response to osteoporosis treatment. The test is safe and painless, similar to an x-ray, and takes about 15 minutes to complete. Your health insurance will cover the cost of the BMD test.

### Medication

Safe and effective medications are available to prevent or treat osteoporosis. Your doctor can help you understand the benefits and risks of different medications, and help you select the medication that is right for you.



### Nutrition

In addition to taking medication, some of the important things you can do are to follow a diet rich in calcium and vitamin D, maintain an adequate daily intake of protein, and monitor sodium intake.

**Calcium** is needed to maintain healthy, strong bones throughout your life.

- Calcium supplements can ensure that you get enough calcium each day.
- Recommended calcium intake from a combination of food and supplements is 1,000 mg per day until age 50 and 1,200 mg per day over age 50. Dairy products such as milk, cheese, and yogurt are excellent sources of calcium. Some nondairy foods with high calcium content are broccoli, almonds, and sardines. In addition, many foods are fortified with calcium including juices, breads, and cereals.
- Calcium intake should be spread throughout the day to maximize absorption. Take a supplement (not more than 500-600 mg) twice a day.
- Avoid taking your calcium supplement with a high calcium meal. For example, if you often choose dairy products at breakfast, then take your supplements at lunch and dinner.
- The tolerable upper limit for calcium is 2,500 mg per day. Do not exceed this amount unless instructed by your physician.

**Vitamin D** plays a significant role in helping your body absorb calcium. As we age, our bodies become less able to absorb calcium, which makes getting enough vitamin D even more important.

- The recommended daily intake for vitamin D is 600 IU (International Units) until age 70. Men and women over age 70 should increase intake to 800 IU daily. Achieving this amount from food alone can be difficult. Good sources of vitamin D are sun exposure (especially in the winter months), fatty fish, cod liver oil, egg yolks, and fortified dairy products.
- For most people, adequate vitamin D intake can be achieved through regularly choosing foods high in vitamin D and a daily multivitamin/mineral or a calcium-plus-vitamin D supplement.

**Sodium**, the main component of table salt, affects our need for calcium by increasing the amount excreted in urine. Choose a low-sodium diet (2,000 mg limit daily) to retain calcium for your bones. To reduce sodium intake, choose salt-free herbs/spices to season your food, and reduce your intake of high-sodium processed foods.

**Protein** also provides benefits for bone health. Protein needs are higher after fracture and increase with age to help maintain lean body mass.

- Studies have shown that older people with a hip fracture who do not have enough protein in their diets are more likely to experience loss of independence, need for skilled care, and even death after their fracture.
- In general, 2-3 servings (5.5 ounces per serving) of protein-rich food is recommended daily.
- Some examples of excellent protein sources are: fish, skinless chicken, lean beef and pork, eggs, legumes (beans, lentils, split peas), nuts, seeds, tofu, low-fat cottage cheese, low-fat cheese, Greek yogurt, low-fat milk, and soy milk.

## **Exercise**

Staying physically active rather than living your life “on the sidelines” helps to protect your bones. Exercise is one of the best ways to preserve your bone density and prevent falls as you age. Physical activity also reduces your risk of heart disease, colon cancer, type 2 diabetes, prostate and breast cancer, high blood pressure, obesity, and mood disorders such as depression and anxiety.

Exercise can reduce your fracture risk in two ways:

- Exercise helps to build and maintain bone density.
  - Weight-bearing exercises use your bones and muscles to work against gravity (walking, climbing stairs, dancing, and playing tennis).
  - Resistance exercises use muscle strength to improve muscle mass and strengthen your bones (weight training with either free weights or weight machines).
  - Exercise helps reduce the risk of falling by improving balance, flexibility, and strength. Swimming, bicycling, yoga, tai chi, and weight lifting are excellent ways to decrease risk of falls.

It is understandable that you may be concerned about falling while you exercise. Be sure to avoid activities that have uneven surfaces or a high risk of falling, such as skiing or skating; those that have too much impact, such as jogging and jumping rope; and those that cause you to twist or bend, such as golf. Most activities can be adapted to meet your age, ability, lifestyle, and strength. Your doctor or physical therapist can help you design a safe and effective exercise program.

## Fall prevention

We want to help you prevent falls because falls are a major cause of fractures. The likelihood that you will fall depends on some personal and home environment factors.

Here is a safety checklist to prevent falls:

### Personal

- Have your vision and hearing checked regularly and corrected as needed. Keep your glasses clean.
- Discuss your medications with your doctor to see if one of them (or combination) may cause dizziness and lead to a fall.

### Environment: indoor

- Use nightlights throughout your home.
- Keep all rooms and floors free from clutter.
- Keep floor surfaces smooth but not slippery. When entering rooms, be aware of differences in floor levels and thresholds.
- Wear supportive, low-heeled shoes even at home. Avoid walking around in socks, stockings, or floppy shoes.
- Check that all carpets and area rugs have skid-proof backing or are tacked to the floor, including carpeting on stairs.
- Be sure that all stairways are well lit and that stairs have handrails on both sides. Consider placing fluorescent tape on the edges of top and bottom steps.
- Keep electrical and phone cords from walkways.
- Install grab bars on bathroom walls beside tubs, showers, and toilets. If you are unstable on your feet, consider using a plastic chair with a back and nonskid leg tips in the shower.
- Use a rubber bath mat in the shower or tub.
- Keep a flashlight and extra batteries at bedside.
- Add ceiling fixtures to rooms lit only by lamps, or install lamps that can be turned on by a switch near the entrance to the room.

- Use at least 100-watt light bulbs in your home.
- Have a portable phone that you can take with you from room to room. It provides security because you can answer the phone without rushing for it and you can call for help should an accident occur.

### Environment: outdoor

- In bad weather, consider using a cane or walker for extra stability.
- In winter, wear warm boots with rubber soles for added traction.
- Use a shoulder bag, fanny pack, or backpack to leave your hands free.
- Stop at curbs to check height before stepping up or down.

### Stop smoking

If you are a smoker, now is a good time to quit. Tobacco and tobacco containing products are toxic to your bones and increase risk for osteoporosis.

### Limit or stop drinking alcoholic beverages

Excessive alcohol intake may be damaging to your bones. People who drink heavily tend to have more bone loss and fractures due to poor nutrition, which increases risk of falling.

*Source: National Institute of Arthritis and Musculoskeletal and Skin Diseases: [bones.nih.gov](http://bones.nih.gov)*



