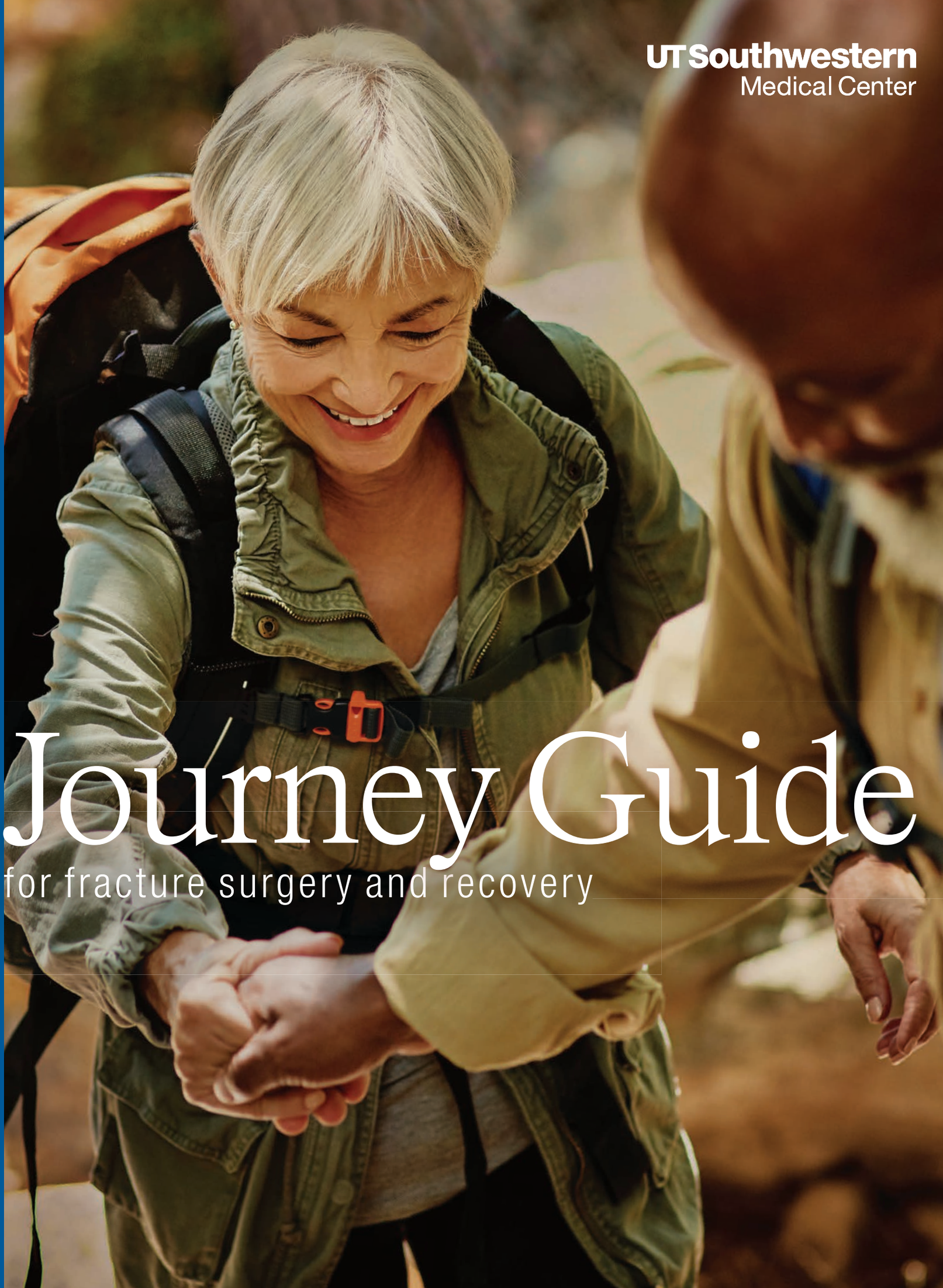
UT Southwestern
Medical Center



Journey Guide

for fracture surgery and recovery

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At UT Southwestern Medical Center, we want your fracture surgery and recovery to go as smoothly as possible. Our orthopaedics team will be by your side throughout your journey. We are giving you this guide to help you prepare for surgery and know what to expect during and after surgery. Working together, we can get you back to normal activities in a safe and timely way. Thank you for choosing us to be your surgical team.

Your Guide to a Successful Surgery

You're in great hands at UT Southwestern. We rank among the best hospitals in the nation for orthopaedics, as noted by *U.S. News & World Report.* This is based on a number of categories, such as patient outcomes, volume of high-risk patients, key programs, services and staff, and professional recognition of the hospital. Also, UT Southwestern has earned The Joint Commission's Gold Seal of Approval. The Gold Seal signifies a health care organization's commitment to providing safe and quality care.

As an added advantage for senior patients, our Returning Seniors to Orthopaedic Excellence (RESTORE) Program is the only program in North Texas focusing on the musculoskeletal health of older adults who sustain fractures and develop the complications that can follow. The program utilizes experts from across UT Southwestern – including specialists in geriatrics, bone mineral metabolism, internal medicine, emergency medicine, anesthesiology and pain management, clinical nutrition, and physical therapy – to provide coordinated, comprehensive fracture care.

Get Started

Use this booklet to help guide you through your fracture surgery journey.

- Bring it with you to your appointments and therapy sessions.
- Review important dates, fill out the checklists, and learn more about your rehabilitation and recovery.
- Find key phone numbers inside, and use this guide to write down questions and take notes.

MyChart Electronic Medical Record

UT Southwestern offers patients an online health aid that lets you talk with your health care providers, request appointments and prescription renewals, and access portions of your UT Southwestern electronic medical record using an encrypted, safe internet connection.

If you are not already using MyChart and would like to, please call the MyChart help line at 214-648-8888 or ask for a link at your next appointment.

Your Orthopaedic Surgery Team

A team of orthopaedic professionals will care for you during your surgical journey. This team is committed to keeping you safe and providing compassionate, world-class treatment services.

Orthopaedic Surgeon

Your surgeon and surgical care team will guide your care and do your surgery.

Physician Assistant (PA)

The physician assistant will work with your surgeon and other members of the team to handle your care.

Anesthesia Team

An anesthesia physician or advanced practice nurse will check your anesthesia needs. This team is specially trained to keep you safe during surgery and in recovery.

Registered Nurse (RN)

Your nurse is trained in orthopaedics and will follow your surgeon's plan for your recovery. The nursing team will teach you how to stay safe and healthy during the different stages of your journey.

Occupational Therapist (OT)

Your occupational therapist will help you with progressive motion and strengthening exercises after surgery.

Physical Therapist (PT)

Your physical therapist will plan the best way to help you achieve mobility after surgery.

Care Coordinator

Your care coordinator is trained as an RN or social worker and will work with your care team to prepare you for discharge. This person can also answer discharge-related insurance questions.

Hospitalist

This doctor oversees your overall medical care while you're in the hospital and handles any medical concerns you might have.

You

The most important member of your health care team is you. Knowing what to expect can help treatment and recovery go more smoothly.

Your Family and Friends

Your family and friends are also important members of your care team. They care about you and can give important, ongoing support during your hospital stay and recovery.

My Healing Goals

Everyone has different goals for recovery from a fracture. Your goals will depend on your activity level before coming to the hospital.

Being active as early as you can helps you get better and heal faster.

Our physical therapy and occupational therapy programs are designed to support your goals and help you learn how to get better.

List your goals below. Talk to your care team about making a plan to reach your targets.

1.

2.

3.

4.


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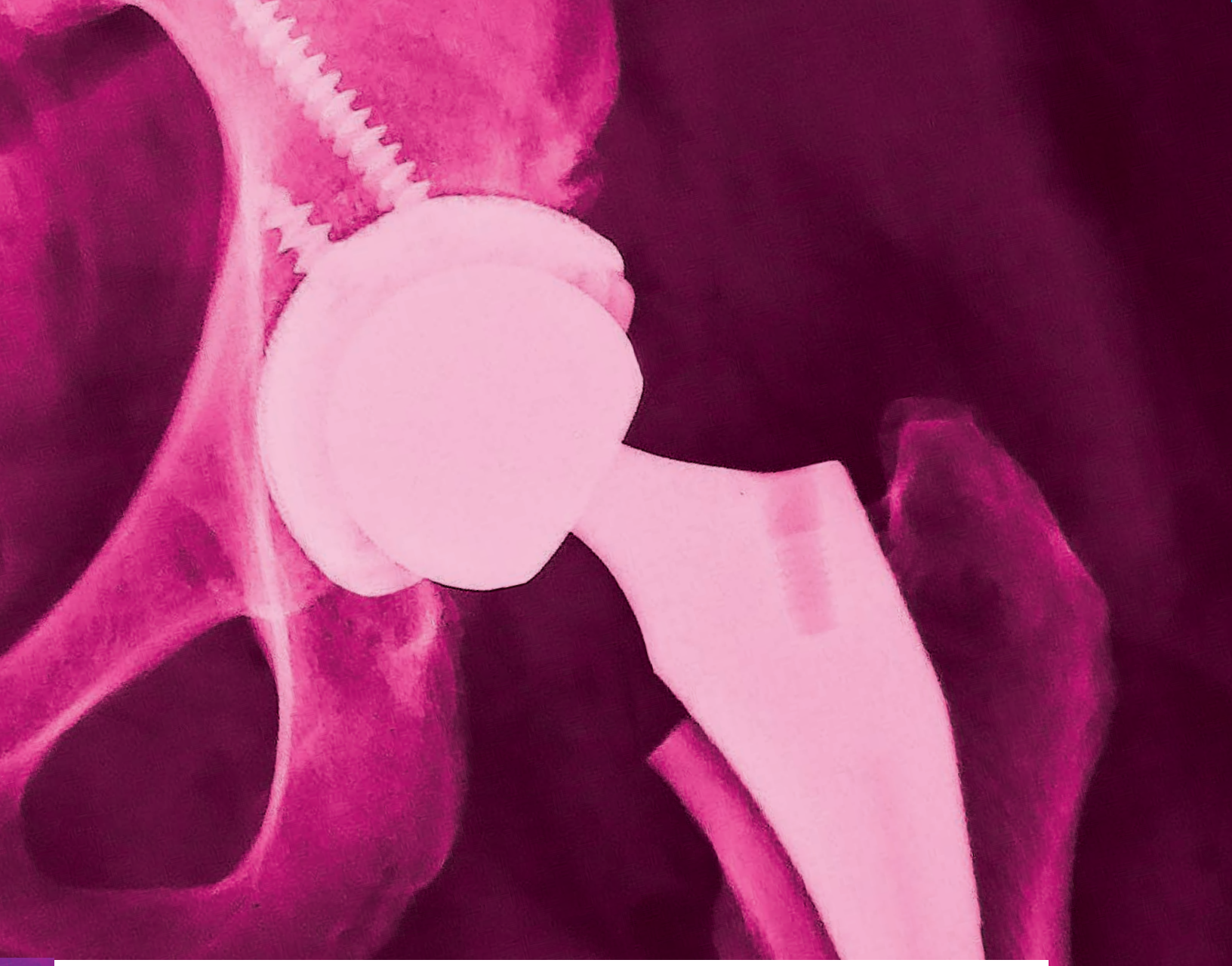
Physical Therapy



What to Expect While You're in the Hospital

At UT Southwestern, we want to make your stay with us as comfortable and safe as possible. Here's what to expect.

Admission to the Hospital

Because of the nature of fractures, patients often are first seen in the emergency department (ED) and are later admitted to the hospital. Patients' time in the ED typically includes:

- A medical test to point out a fracture, such as an X-ray, as well as lab tests and an electrocardiogram (EKG) to check the heart
- Visits from clinicians to make a safe plan to treat the fracture

After you're admitted, you'll be given a room. Stay in your hospital bed until your care team decides it's safe for you to get out of bed.

If we recommend surgery, it is most often scheduled within a day or two of hospital admission, unless a separate health problem causes a delay.

The surgeon who sees you when you're admitted to the hospital might not be the surgeon who does your surgery. If the surgeon changes, we'll talk to you about the change.

- We suggest you fill out an advance directive, which is a document with written instructions stating your wishes in health care decisions when you might not be able respond.
- If you'd like a visit from our Chaplain Services department, ask your nurse to arrange a visit.
- Start thinking now about your discharge and where you'll go when you're released from the hospital.

Choose a Personal Champion

- The person you pick will motivate you to be your very best during your journey. Select a family member or friend who can be by your side to help you stay on track to fill out your checklists and be successful.
- Your personal champion will help you meet your surgery planning and recovery goals.
- Your personal champion will help you become independent faster. He or she will learn the needed exercises and encourage these daily activities when you go home.
- When you first get home, your personal champion can stay with you for a few days or visit daily. This home support will encourage you during your recovery journey.

Handling Pain

Pain after a fracture is normal and to be expected, but pain can differ from person to person.

Different treatment options are available to help ease your pain. Your team will work with you to handle your pain after surgery. You will need to tell us when your pain starts to feel unmanageable.

Please note that no pain medication will be scheduled. You will use a pain scale as a guide to ask for medication based on how you feel. We will strive to give you enough pain medication to keep you moving without leaving you feeling nauseous or sleepy. Talk with your care team about making a plan to handle your pain.

Ways to Handle Pain Without Medication

- Positioning
  - Moving your body into different positions can ease pressure.
- Elevation
  - If possible, use pillows to elevate the injured part of your body above the level of your heart. Check with your care team before elevating to see whether you have any restrictions.
- Cold therapy
  - Using cold packs or ice on the injured area can help reduce pain and swelling. To avoid frostbite, place a towel or cloth between your skin and the ice pack – don't put ice directly on your skin. Use the ice pack in only 20-minute intervals, applying the pack for 20 minutes and removing it for 20 minutes, repeating as needed.
- Massage
  - Massage relieves tension in tired, achy parts of your body.
- Music
  - Listening to music can help take your mind off the pain.
- Positive thinking
  - People who stay positive and hopeful feel less pain or are less bothered by pain than people who don't think as positively.
- Relaxation
  - Meditation, breathing, prayer, and yoga help relieve worry and muscle tension. The exercise below can help you feel more relaxed.

Relaxation Exercise: Breathing Away the Pain

Practice this relaxation exercise to help calm yourself and boost feelings of comfort. The exercise also can help your pain medication work better.

1. Lie in as comfortable a position as possible.
2. Breathe in and out slowly and deeply. Concentrate on making each breath even. Count to three as you breathe in and again as you breathe out.
3. Feel your body relax.
4. Imagine the pain leaving your body as you breathe out.
5. Continue breathing deeply, slowly, and evenly.
6. Imagine yourself in a calm, peaceful setting, such as a beach or another soothing place.
7. Continue this rhythmic breathing for up to 20 minutes, letting the pain go as you breathe out.
8. When you're ready, let yourself become more alert and aware of your surroundings.
9. End the exercise with a slow, deep breath, and say to yourself, "I'm comfortable and calm." Enjoy the good feeling, and try to conceptualize keeping that feeling with you.

Time for Surgery

Please review the following information to help ensure a safe and successful surgery.

UTSW's Enhanced Recovery After Surgery (ERAS) Program is designed to optimize patients' surgical experience and to help patients return to health quickly after undergoing surgery.

Composed of many specialties to help patients' surgical results and overall satisfaction, the program's evidence-based approaches have already been shown to aid pain control, lower surgical problems, and decrease the amount of time patients need to stay in the hospital. Your part in the program starts in the emergency department if your fracture treatment plan includes surgical repair.

The first measures involve treating your pain and preparing you for surgery. Preparations may include blood tests and other tests based on your medical condition. Your care team members will each do their part to aid in your recovery.

Day Before Surgery

The day before surgery, do not eat solid foods after 11 p.m. You can drink up to 20 ounces of clear liquid (e.g., water or Gatorade®) up to two hours before your surgery start time.

Day of Surgery

On the day of surgery, your anesthesia team will talk to you about your anesthesia plan. Your surgeon and the anesthesiologist have worked together on the choice for your anesthesia based on your medical history and the type of surgery you will be having. The anesthesia plan is tailored to you with the goals of optimizing your safety, comfort, and early recovery. Members of the orthopaedic surgery team will review the surgical plan with you and mark your surgical site. You will be given medication for comfort and antibiotics before your surgery.

Based on the specific nature of your surgery, your doctor might ask the anesthesia team to complete a nerve block before your surgery for improved intraoperative and postoperative pain control. A nerve block involves placement of numbing medication as guided by an ultrasound machine around nerves at the site of your fracture. Your anesthesia provider will talk to you about the risks, benefits, and details of this technique if it is right for your surgery.

Family/friends/your personal champion may stay in the presurgery room until surgery. The whole surgery process – from the time you leave your hospital room until you return to it after the procedure – usually takes four to five hours.

After Surgery

After surgery, your care team will continue to enhance your healing. Based on your injury, your recovery might include physical therapy, occupational therapy, or both; meanwhile, other specialists on your care team will be working on making your nutrition and diet better, treating any pain you might have, addressing other medical conditions if you have them, decreasing the risk of postsurgery problems, and deciding what level of support you will need after discharge and where the best place for you to get that will be.

A Word About Medications

We will use a mix of narcotic and non-narcotic medications to safely reduce any pain you might have after surgery. Be open to trying this routine; you will be pleasantly surprised how well it works. Narcotic medications may have side effects including nausea, vomiting, itching, drowsiness, constipation, and hallucinations, which can slow your recovery.

We will work with you to lower your risk of addiction and abuse, which can be managed if the medications are used the right way for a short period of time and for the right reasons. Non-narcotic medications can lower the number of stronger medications used, which in turn will lower the risk of side effects. Our goal is to create a smooth, safe, comfortable recovery while reducing problems.

Postsurgical Movement and Activity

Moving as soon as possible after surgery has been proven to enhance outcomes and reduce health problems after surgery. With the aid of a physical therapist or nurse, you will get out of bed the same day or next day after your surgery. Movement helps your circulation, breathing, and digestion. Movement will also reduce the risk of a blood clot (or deep vein thrombosis) and will open up your lungs to prevent pneumonia and postoperative fevers.

Your safety and fall prevention are priorities, so please do not get out of bed without help from our team. Use your call system any time you need help moving.

Blood Clot Prevention

Your surgeon and care team will decide the medical treatment you need to prevent a blood clot.

After surgery, you will be given a blood-thinning agent based on your medical history. This could include aspirin or other medications used to help prevent blood clots.

For your safety, follow these additional blood clot/deep vein thrombosis prevention measures:

- Wear the sequential compression devices while you are sleeping and when you are resting during your hospital stay.
- Take your deep vein thrombosis prophylaxis as prescribed after surgery.

You are encouraged to move your feet, ankles, and knees while in bed and also to walk every one-and-a-half to two hours each day to increase blood flow, reduce swelling, and lower joint stiffness.

If you feel your needs are not being met while you are in the hospital, please do not delay in alerting your nurse.

Pneumonia Prevention

A member of the nursing team will bring a breathing device called an incentive spirometer to your room and teach you how to use it. This is to help the movement of air and the airflow in your lungs. Getting out of bed to walk and using a spirometer will help you take deeper breaths and increase airflow to the lungs. Spirometry also helps with postoperative fevers, so please use the device as taught by your spirometry team.

Nutritional Needs/ Gastrointestinal Issues

Some people can have an upset stomach after surgery due to anesthesia and pain medication. You will have anti-nausea medication ready after surgery; please tell the nurse if you need this medication. Eating small meals and taking frequent sips of water will help with nausea and dehydration.

Protein is a basic part of healing, so you will be given a protein drink with each meal, along with water. Drink plenty of fluids, mainly water.

Some people can have constipation due to anesthesia, pain medication, and lack of activity. You might be given the following medications to prevent constipation:

- Colace–taken as a pill at breakfast and dinner
- Metamucil–taken in juice or water
- MiraLAX–taken in juice or water once per day

Continue the use of a bowel regimen until your bowels return to their normal order. It can take a few days after surgery for a bowel movement.

Postoperative Occupational and Physical Therapy

Your therapists will visit you once you are settled in your hospital room after surgery and create an individualized exercise program for you. The occupational therapist will give you a kit that may include a "reacher," which is a tool to help with putting on socks, along with a tool to help you lift your leg. Your therapist will review activities of daily living with you to help with your transition home and to decide what tools you will need for home.

The physical therapist will teach you goals for postoperative mobility; depending where your fracture was, these might include how to:

- Get in and out of bed
- Walk with a walker
- Climb stairs
- Perform exercises

Your goal in the first six weeks after surgery is healing. We want you to have balance and be mobile on your assistive device (walker, crutches, etc.) while you work on your gait (the way you walk) and your mechanics. The physical therapist will see you each day while you're in the hospital and help make sure you are safely ambulating (walking) before your discharge. Please alert the therapist to any things you have at home that might get in the way and have not been mentioned yet.

Postoperative Surgeon Visit

Your surgeon will be up to see you by the end of the day after your surgery to talk to you about your procedure and answer any questions. You will have a postoperative appointment set up to see your surgeon in the clinic. You will also be given a phone number to call if that day/time is not convenient for you.

Length of Stay

You will have to successfully reach a few recovery standards before you are discharged. You will need to have your pain controlled on oral medications, and you must be approved to go home by the physical therapy team. This means you must be able to get in/out of bed, walk to the bathroom, and show abilities in doing simple activities of daily living. Please note that the length of stay in the hospital differs for different patients and their type of surgery. Every patient is unique.

Delirium Prevention

Delirium is a change in a person's thinking that can develop postoperatively over many hours or a few days. Its main sign is severe confusion. People who are delirious have trouble thinking clearly and paying attention and are not aware of what's going on around them.

Patients can prevent delirium by staying active and alert in the hospital.

Activities that forestall delirium include:

- Staying connected to people, places, and time with daily newspapers, cards from family and friends, and chats
- Keeping the mind active with crossword puzzles, word searches, Sudoku, card games, music, or pet therapy
- Staying physically active with gentle range-of-motion exercises with arms or legs
- Relieving worry and pain with relaxation techniques, such as aromatherapy or guided imagery

Keeping a routine sleep schedule also can help prevent delirium. During the day, keep the blinds open and the room lights on. Try to stay awake and active. In the evening, turn the lights off, lessen distractions, and try to get as much sleep as you can. (Please note that while we try to limit interruptions as much as possible in the hospital, we might need to wake you up in the evenings to give care.)

If you most often wear eyeglasses or hearing aids, continue to use them as much as possible while you're in the hospital, so you can see and hear what's around you.

Discharge

Are you ready to leave the hospital?

Since the beginning of your journey, the team has been working with you through your preoperative care, surgery, and now your discharge and rehabilitation.

Our goal is to ease your pain and get you back to the activities you enjoy. That requires active involvement on your part.

Throughout your stay, we will be checking your progress, your strength and endurance abilities, and all the resources needed for your safe recovery.

You will be discharged from the hospital once your pain is controlled with oral medications and you have met all the safety goals.

Review Your Discharge Instructions

A nurse will review your discharge information with you and your family. You will be given a prescription to handle postoperative pain. Please ask questions, so you know what is expected of you. Be sure to find your physician "discharge instructions," which will include dates for follow-up appointments, information on dressing management, medications, icing, and elevation.

Let Us Know Where You Are Going

The care coordinators and social workers at the hospital will help set up the care you need upon discharge and help facilitate all your discharge needs. If you have a home health or other facility that you would like to use, please bring the name, address, and phone number with you and give these to the care coordinator involved in your care.

If where you are going is home, a home health physical therapist will come postoperatively once you are discharged. The timing and length of home health can change, based on your surgery.

If you are going to a nursing or rehabilitation facility, the care coordinator or social worker will help get you set up for your transportation.

Leaving the Hospital

When it's time to leave the hospital, you will be transported by wheelchair to the patient pick-up area. Be sure to gather all of your belongings. This includes any dressings or incision care items that have been given to you at the hospital.

Optimizing Post-Fracture Care

A fracture can greatly change your life, at least in the short term. You will not be able to drive until cleared by your doctor. You might need to count on family or friends to get around.

You also might be at risk for having another fracture. Several factors increase your risk, including:

- Being older than age 50
- Having trouble with your ability to balance
- Having osteoporosis (weak, brittle bones)

The most important risk factor, however, is having had a fracture. Having broken a bone in the past is a very good predictor of your risk for having a fracture in the future.

For this reason, now is the time to take steps to prevent another fracture.

Have a DXA Scan and a Bone Health Checkup

A DXA (also called DEXA) scan is a test to measure bone density. When you don't have enough minerals (calcium and phosphorus) in your bones, you have low bone density. With low bone density, your bones become thin and brittle and can fracture easily.

Low bone density can be due to osteoporosis.

When you get home from the hospital, we will help arrange a DXA scan as well as a follow-up visit at our Mineral Metabolism Clinic. Most often, this visit happens about six to eight weeks after surgery.

Mineral Metabolism Clinic
Professional Office Building 2
5939 Harry Hines Blvd.
Dallas, TX 75390
214-645-2870

Going to your bone health visit is important for your recovery. At this appointment, you'll talk with your clinician about:

- The results of your lab tests and DXA scan
- Your medical and family history
- The best treatment choices for your bone health, which might include:
  - Exercise or physical therapy for balance, core strengthening, and fall prevention
  - Nutrition or supplement recommendations
  - Medications
  - Follow-up testing

Prevent Future Falls

Some factors increase your risk of falling. For example, controlling your balance depends in part on your muscle strength, brain function, and senses such as eyesight and hearing.

Eyesight problems can make it hard to judge distance and avoid obstacles. Hearing problems can

cause dizziness or affect your ability to know cues that help you keep your balance.

Other factors that can increase your risk for dizziness include not having enough fluids, poor nutrition, and medication side effects.

Medication side effects can also cause drowsiness and decreased response time. Both can increase your risk of falling.

Talk to your clinician if you:

- Have any side effects from your medications
- Take laxatives
- Have eyesight problems
- Have pain or loss of feeling in your feet
- Lose your balance often
- Rely on furniture or other people for support in walking or to help you control balance

Other ways to decrease the risk of falls:

- Wear footwear that fits well.
  - When you're on wet or snowy walkways, wear boots or shoes with good traction.
  - When you're inside, wear nonskid slippers or shoes.
- If you feel dizzy when you stand up, stand still for a few moments to make sure you're steady on your feet.
  - Ask for help when walking or standing if you feel lightheaded or dizzy or if your legs feel weak.
- Wear prescription glasses or contact lenses if needed.
- Watch out for your pets while walking to avoid tripping and falling.

Make Your Living Area Safe

In the bathroom:

- Put grab bars securely on the walls next to the toilet, tub, and shower. Don't hold onto towel bars when moving around.
- Put nonskid strips or a rubber bathmat in and around the tub and shower. Think about removing mats when not in use to lower the chance of tripping.
- Use a bath stool when you bathe or shower.
  - The stool should have rubber tips that don't slip. A chair with a back gives even more support.
- Keep a stool in the bathroom for when your legs get tired from standing.
- Put in nightlights, so you can see where you're walking.
- Put in a toilet seat lift to make standing up from the toilet easier. If needed, have someone with you.

In the bedroom:

- Keep a phone within easy reach of your bed.
- Place a lamp at the bedside where it's easy to reach and use.
- Keep a commode or urinal near your bedside if walking to the bathroom is unsafe.
- Keep a loud bell or buzzer by your bed to call for help at home.

On stairways:

- Put in sturdy handrails on both sides of stairways – indoors and outdoors.
- Keep all stairways clean, free of clutter, and in good repair.
- Use short-pile carpet. You are more likely to trip and fall on deep-pile carpet.
- Use nonskid strips on bare steps.
- Put light switches at the top and bottom of stairways.
- Increase lighting and use motion lights for outside steps and entryways.
- Place reflective tape on stair edges to make them stand out.

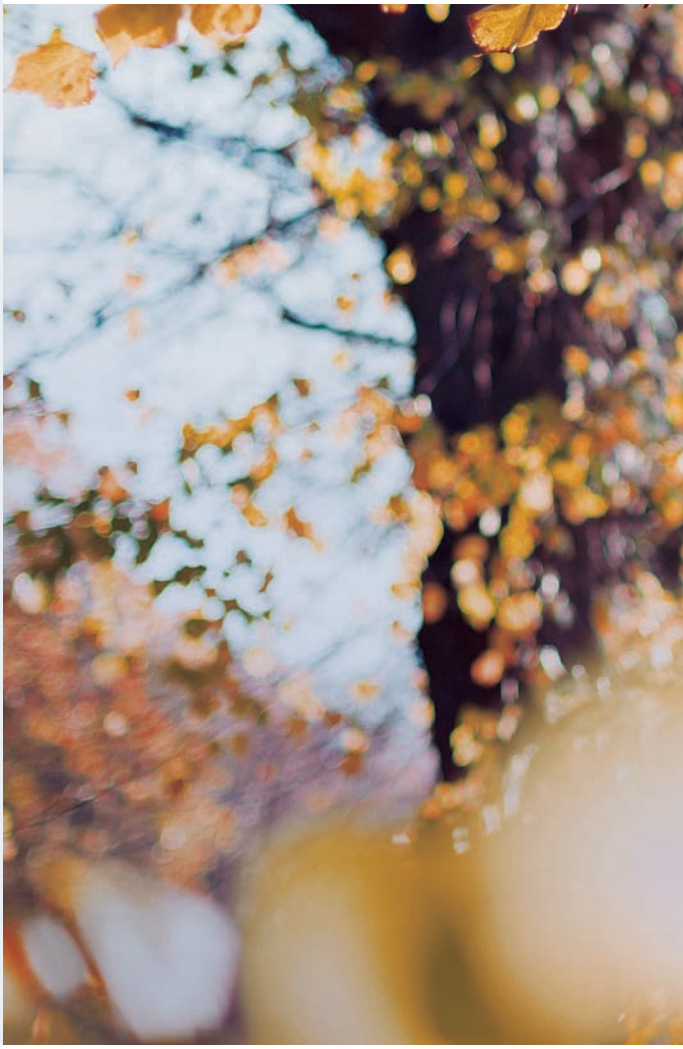
In hallways, walkways, and living areas:

- Keep a portable phone with you at all times. Never hurry for a phone call.
- If you use a walker, equip it with a walker bag to carry small items.
- Keep electric cords off the floor and close to walls. Never stretch cords across walking areas.
- Arrange furniture so you can walk easily through rooms.
- Keep all areas free of clutter.
- Remove rugs or tape down their edges.
- Fix loose floor tiles.
- Keep floors dry. Don't wax floors.
- Use a reacher to grab some items. A reacher is a long stick with a hook on the far end and a control on the handle end.
- Keep a stool in the kitchen for when your legs get tired from standing.
- Place all needed items within easy reach. When reaching for objects, always hold on to a sturdy base of support with one hand.

Stay Active

Being physically active is one of the best ways to prevent future falls.

- After you leave the hospital, keep up with your physical therapy exercises.
- Talk with your clinician before starting any physical activity program (such as the suggested activities that follow), especially as it relates to your injury and recovery.



Walking

Walking is a lasting form of low-risk exercise that improves fitness and increases your stamina and energy levels. The more you walk, the more balanced and coordinated you'll become and the less likely you'll be to fall.

Here are some tips for a successful walking program:

- Wear supportive shoes designed for walking.
- Walk with a friend.
- Work walking into your daily routine.
- Explore new routes.
- Have a backup plan for bad weather.

Tai Chi

Tai chi is a form of gentle, moving meditation that relaxes the mind, energizes the body, and promotes better balance and spatial awareness.

Other Activities

Other physical activities that can help improve general fitness and balance include:

- Pool exercises
- Chair exercises (videos or classes)
- Weight training
- Dancing or aerobic classes
- Jogging
- Yoga

Improve Overall Bone Health

Your bones make up your body's skeletal system. The amount of bone tissue in your skeleton is known as bone mass. Starting in childhood, your bone mass keeps growing and increasing in strength and density until it reaches peak bone mass.

Peak bone mass is the maximum level of bone density you reach in your lifetime. It most often occurs by the time you're 30 years old. After that age, bone mass slowly decreases.

Your body continually removes and replaces old bone. But after age 40, your body replaces bone at a slower rate than before.

Why Bone Health Is Important

Understanding the factors that can affect your bone health is important. The more you know about bone health, the more you'll be able to recognize and avoid the risks for injuries related to bone health.

What Affects Bone Health?

Calcium intake. Getting the right amount of calcium every day helps keep bones healthy.

Physical activity. Regular physical activity, especially weight-bearing activities, makes strong bones.

Tobacco and alcohol use. These substances lower bone health.

Gender. Women's peak bone mass is less than men's. Women also have smaller bones than men. Lower peak bone mass and smaller bones put women at higher risk for osteoporosis.

Age. Your body becomes less able to take in calcium and other nutrients as you get older. This increases your risk for bone loss and osteoporosis.

Family history. Osteoporosis tends to run in families. If a family member has osteoporosis or breaks a bone, chances are higher that you will, too.

Lifelong diseases. Rheumatoid arthritis, chronic obstructive pulmonary disease (COPD), chronic heart failure (CHF), hyperglycemia (high blood sugar), and other chronic (ongoing) diseases affect bone health and can increase your risk for broken bones.

Certain medications. Some medications can limit your body's ability to take in calcium or can weaken your bones in other ways. Talk to your clinician if you have any concerns.

Building and Keeping Up Bone Health

Many nutrients (vitamins and minerals) support and keep up bone health. You can get these nutrients by eating a variety of better-for-you foods, such as fruits and vegetables, lean protein (such as fish and poultry), dairy, whole grains, nuts, seeds, beans, and legumes.

The three most important nutrients for supporting and keeping up bone health are:

- Calcium
- Vitamin D
- Protein

Calcium

While most people know calcium is important, many people get less than half the recommended daily allowance needed to build and keep up healthy bones.

Calcium needs change over one's lifetime. The needs are greatest during childhood and adolescence; in women who are pregnant, nursing, or postmenopausal; and in people older than age 70.

Milk and other dairy products are high in calcium. Nondairy sources of calcium include canned salmon with bones, orange juice made with calcium, Total brand cereal, nondairy milk (e.g., soy milk, almond milk), and tofu.

Recommended Daily Calcium Allowance for Adults

Women and men ages 19 to 50	1,000 mg*
Women ages 51 to 70	1,200 mg
Men ages 51 to 70	1,000 mg
Women and men older than 70	1,200 mg

* mg = milligrams

What About Calcium Supplements?

Calcium in food is a much better source of calcium than supplements. If you choose to use supplements, keep the following information in mind:

- Many supplements are available over the counter.
- The most common supplements are calcium carbonate and calcium citrate. Both of these provide calcium that can be soaked up and used by your body.
- Most calcium supplements are well-tolerated (don't cause bad physical side effects, such as upset stomach or headache).
- If you're taking 600 mg or more of supplemental calcium each day, split the dose (for example, take half the dose in the morning and half in the evening). Your body absorbs calcium better when it's taken in amounts less than 500 mg at one time.

Vitamin D

Vitamin D helps your body soak up calcium. Together, calcium and vitamin D help protect adults older than age 50 from osteoporosis. The table below shows how much vitamin D to aim for each day.

Minimum Recommended Daily Vitamin D Allowance	
Ages 1 to 70	1,000 IU*
Older than 70	2,000 IU

* IU = international units

Your body makes its own vitamin D after direct exposure to sunlight. However, many adults living in the U.S., even those in Southern states, don't get enough vitamin D. Lack of vitamin D is especially a problem during the winter, when sunlight is limited.

Fatty fish, such as salmon, tuna, and mackerel, are one of the best sources of vitamin D. Most food sources of vitamin D are those in which it has been added during processing. Good examples of foods that have vitamin D are milk, breakfast cereals, orange juice, and yogurt.

Protein

Getting enough protein for bone health and overall health is important. Many adults older than age 70 don't get enough protein in their diets, and not getting enough protein can negatively affect both muscles and bones.

If you have poor kidney function, however, it's important not to get too much protein.

Foods high in protein include dairy products, meat, poultry, fish, eggs, legumes (beans, peas, and lentils), and nuts. Smaller amounts of protein are in vegetables and grains.

Laboratory Testing for Bone Health

While you're in the hospital, you might have blood tests done to check your levels of the following:

- Vitamin D
- Calcium
- Parathyroid hormone, which helps your body reabsorb calcium and rebuild bone

Your care team may go over the results of these tests with you while you're in the hospital. You'll also discuss the results with your clinician at your follow-up bone health visit.

Other Actions You Can Take

As noted earlier, staying physically active improves your bone health as well as your overall health.

Exercise also increases your balance, muscle strength, and coordination. But again, talk with your clinician before starting any physical activity program.

Avoid Tobacco and Alcohol

Using tobacco and drinking too much alcohol are harmful to bone health. Smoking lowers the blood supply to the bones and hinders the body's ability to absorb calcium, which leads to having lower bone density and weaker bones. Heavy drinking also gets in the way of the body's absorption of calcium and vitamin D.

Care-at-Home Checklist

- ☐ Wear shoes that have enough support to reduce the risk of slips and falls. Do not wear backless or open-toe shoes.
- ☐ Stand up slowly to prevent feeling faint.
- ☐ Lower the risk of stiffness by changing positions as much as possible or by taking short walks.
- ☐ Do not lift heavy objects.
- ☐ Do not sit in low places.
- ☐ Go to all of your health care wellness checks.
- ☐ Do not drink alcohol until after your follow-up appointment with your surgeon.
- ☐ Get up and walk every one-and-a-half to two hours.
- ☐ Do not use your walker for more than 30 minutes at a time.
- ☐ Rest between walking sessions; do not overdo it.
- ☐ Ice your hip and raise your leg with “toes above nose” at least three times a day.

Important Phone Numbers

- UT Southwestern Orthopaedic Surgery Clinic – Dallas: **214-645-3300**
- UT Southwestern Orthopaedic Surgery Clinic – Richardson/Plano: **972-669-7070**
- William P. Clements Jr. University Hospital:
  - Guest and Patient Services **214-633-4710**
  - Admissions Department **214-633-4140**
- Zale Lipshy Pavilion:
  - Guest and Patient Services **214-645-4101**
  - Admissions Department **214-645-4637**
- UT Southwestern Medical Center at Frisco: **469-604-9000**
- Financial Counseling (for all locations): **214-633-4036**
- Tobacco Cessation Program: **214-761-3139**
- UT Southwestern Center for Human Nutrition: **214-648-2890**

Home Health Agency:

Outpatient Therapy Center:

Primary Care Physician:

Dentist:

Specialist(s):

Notes and Questions

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