

# Your Guide to Spine Surgery

at Northwestern Medicine Central DuPage Hospital  
and Northwestern Medicine Delnor Hospital



Northwestern Medicine is committed to providing excellent care and an outstanding patient experience.

You are the most important person on your care team, and your involvement in your treatment and rehabilitation is necessary for your recovery. This booklet explains what to expect before, during and after your spine surgery. Please bring it with you to the hospital for reference.

Thank you for choosing Northwestern Medicine.

Please note: Not all of the information in this booklet is applicable to all spine surgery patients. Always follow the recommendations from your care team. If you have any questions, please call your surgeon's\* office for clarification.

\*In the spirit of keeping you well-informed, some of the physician(s) and/or individual(s) identified, are neither agents nor employees of Northwestern Memorial HealthCare or any of its affiliates. They have selected our facilities as places where they want to treat and care for their private patients.

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# Northwestern Medicine Central DuPage Hospital Campus Map






- Valet Parking
- Parking Lot
- Building Entrance

On the day of your surgery, use Entry 1 on Jewell Road and enter the hospital at the East Entrance. Complimentary valet parking is available starting at 5 am.



# Northwestern Medicine Delnor Hospital Campus Map



-  Valet Parking
-  Parking Lot
-  Building Entrance

On the day of your surgery, or for your Pre-Admission Testing, use Entry 1 on Williamsburg Road and take Delnor Drive to the hospital's South Entrance. Complimentary valet parking is available starting at 7 am.

# Understanding your spine

To help you better understand your procedure, it may be helpful to know more about the structure and function of your spine.

The spinal cord is part of the central nervous system. It has bundles of nerves that carry signals between your brain and your body. Damage to these nerves can cause medical conditions in the parts of the body controlled by them.

The spine is made up of 33 small bones called vertebrae, which surround the spinal cord. Between the vertebrae are spongy cushions called disks. If the disks collapse, they may pinch the nerves running from the spinal cord in that area.

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The spinal cord and spine are divided into 4 regions:

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The **cervical region** contains nerve roots that connect to the upper body, including arms and hands.

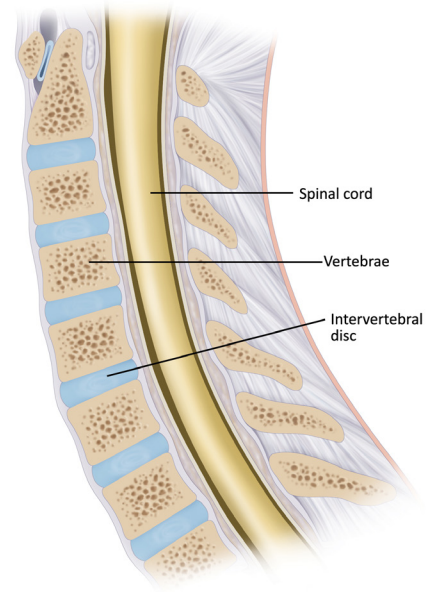
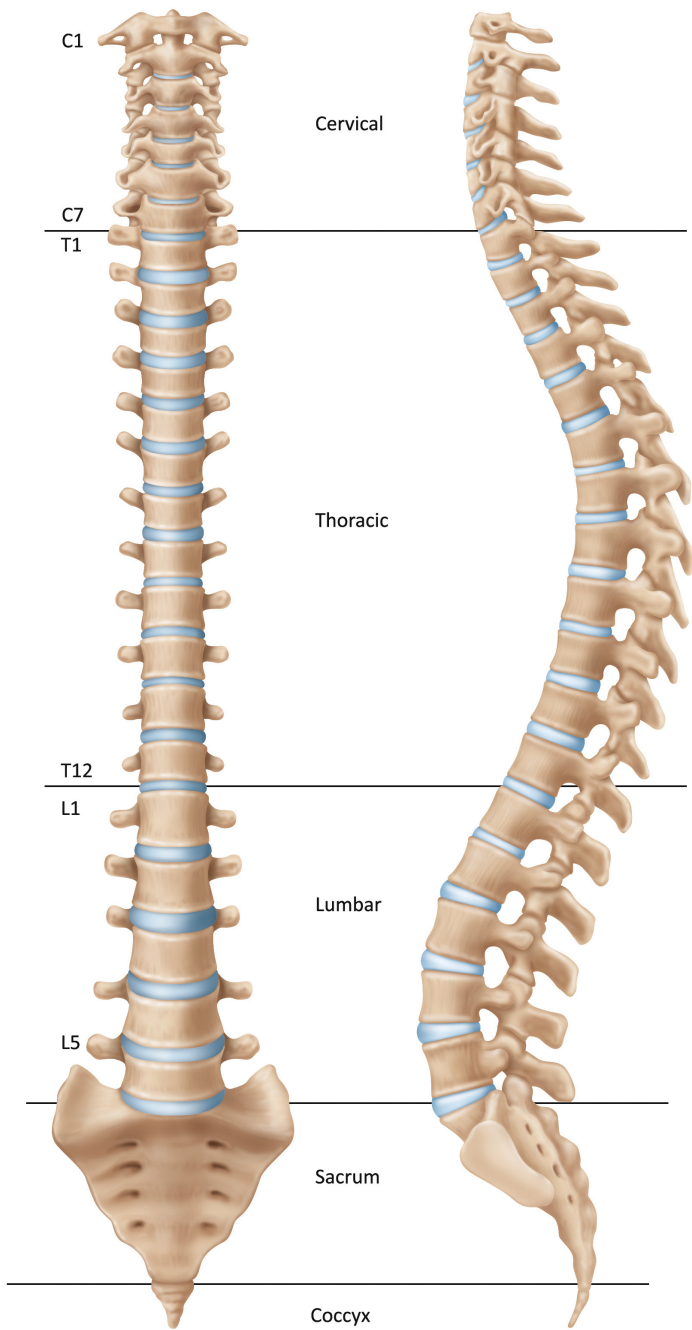
The **thoracic region** contains nerve roots that run to the chest and stomach.

The **lumbar region** nerve roots control the legs. It also contains a bundle of nerve roots known as the cauda equina.

Finally, the **sacral region**, the lowest part of the spine, controls the thighs, lower legs, and genital and anal areas.

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Normal spine



*Cross section of spine (detail)*

# Preparing for your surgery

During the next few days and weeks, you will need to:

- Prepare your home for your return
- Complete lab work or other tests ordered by your physicians\*
- Select a coach or support person to assist you at home for the first week after surgery
- Watch Emmi® educational internet programs, if directed to do so

## Emmi programs

Prior to your surgery, we recommend you watch the assigned educational web-based programs. The pre-admission review nurse or your surgeon's\* office staff will provide you with the information you will need so you can view these programs.

## Physician visits and lab tests

Before surgery, most patients will complete an evaluation that may include a pre-operative physical exam, lab tests, EKG and X-rays. Please be sure to speak with a pre-admission review nurse before you go for testing; anesthesia guidelines may call for additional tests.

Your physician\* may also discuss temporarily stopping the use of some medications, such as anti-inflammatory medications, about one week prior to surgery. Stop taking aspirin two weeks prior to surgery. These medications tend to make your blood thinner and could cause more bleeding than expected during your surgery.

## Dental care before surgery

Any invasive dental work, including routine cleanings, cavity filling, extractions, root canals or implant work, can introduce bacteria into the bloodstream. If you are scheduled to have dental work within the six weeks prior to your spine surgery, please tell your surgeon's\* office staff. Your surgeon\* may provide specific instructions or guidelines for you to follow. Consult your surgeon\* regarding the length of time to wait after surgery before scheduling any future dental appointments.

### Infection prevention

Infection is a rare complication of spine surgery. We take special precautions to help prevent infections. If you have any signs or symptoms of infection prior to surgery, such as an open sore, flu symptoms, a cut, infected teeth or a bladder infection, tell your physician\* immediately. Your surgery may need to be delayed until you receive appropriate treatment.

While in the hospital, you will receive antibiotics before and after surgery to reduce your risk of infection.

If you have any signs or symptoms of infection prior to surgery, tell your physician\* immediately.

### Health history

Once you have a confirmed surgery date, you will need to provide a complete health history. One of our experienced pre-admission nurses will call you to obtain your detailed health history. This phone call may take up to 30 minutes.

After this phone call, you will be given instructions for the next steps, such as what tests will be performed and where to go for testing. Tests can be scheduled at Central DuPage Hospital, Delnor Hospital or one of our convenient care centers. Some tests can be performed on a walk-in basis with no appointment necessary. Your nurse can explain which tests will need to be scheduled in advance.

### Pre-admission Testing Clinic at Delnor Hospital

If your surgery is scheduled at Delnor Hospital, you will have your testing done in the Pre-admission Testing Clinic at Delnor Hospital. This visit provides you the opportunity to ask questions in person and become familiar with the hospital before surgery.

You will meet with a member of our nursing team, who will provide pre-operative education. If required, one of our nurses will draw blood for labs and other testing. You will also meet with one of our anesthesiologists.

### Prepare your home

You need to prepare your home so it is ready for your return following spine surgery.

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#### Some things you may need to do:

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Prepare meals ahead so they can be easily reheated

Move items normally stored in high or low places to the counter or table for easy access without reaching or stretching

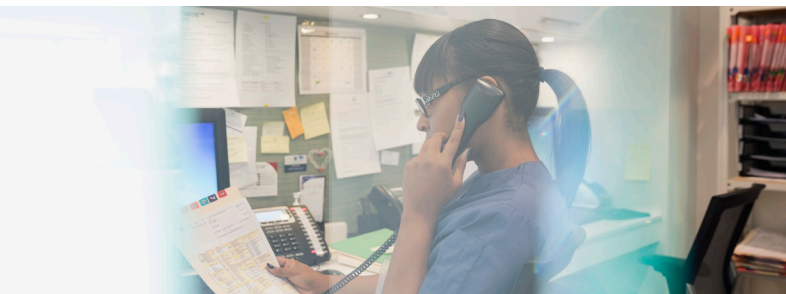
Remove throw rugs and move small tables, ottomans (footstools) and chairs out of your path

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### Choose a coach

As you prepare for surgery, another important thing to decide is who will be your coach or support person once you're home. This can be a family member or friend. Whomever you choose should plan to watch the Emmi programs and help prepare your home if you're not feeling up to the task.

Most importantly, they need to be with you at least the first week after you return home. You may need assistance with meal preparation and activities of daily living during the first couple of days to help you avoid an injury or a fall.



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### Pack your hospital bag

You may be discharged the day of surgery, or you may be in the hospital for up to 3 days. If you stay overnight in the hospital, you don't need to pack much.

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#### What to bring to the hospital

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- Your brace, if you were fitted for one.
- Your CPAP mask if you use one at night when you sleep
- Insurance and Medicare cards
- A list of all your known allergies (medication, food and environmental) and a description of your allergic reactions to each
- Toiletries, such as toothbrush, toothpaste, comb, brush, deodorant, lotion, contact or eyeglasses case, and dentures case
- List of any special dietary requirements
- Underwear, socks, loose comfortable pants or shorts, button-down shirts, and shoes to wear during therapy (these can be the same clothes you wear to the hospital the day of surgery)
- This book and any materials provided to you by your surgeon\*

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#### The "Do Not" list

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Do not wear makeup the day of surgery

Do not bring cash or personal items of great value

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### Your surgery schedule

We will notify you of your surgical time after 2 pm the business day before your surgery. If your surgery is on a Monday, we will call you on Friday. During this phone call, a member of the Surgical Services staff will tell you:

Your scheduled surgery time

What time you need to arrive at the hospital

What time to stop eating and drinking the night before surgery

What, if any, medication(s) you are to take the morning of surgery, including insulin

What, if any, medication(s) you should bring with you to the hospital

What, if any, day-of-surgery tests have been ordered

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**If you will not be home, or you miss our call, please contact us after 5 pm, Monday through Friday, to receive this information.**

If your surgery is at **Central DuPage Hospital**, call 630.933.2647.

If your surgery is scheduled at **Delnor Hospital**, call 630.208.4038.

TTY for the hearing impaired 630.933.4833.

# Your nutrition

Good nutrition before and after surgery is important. A healthy diet helps build muscle strength, which is needed for a full recovery.

## Calcium

Most of the calcium in your body is stored in your bones and teeth. The rest is used in your blood, muscle and the fluid between cells.

### Benefits of calcium

Regulates muscle contraction, including heartbeat

May help control blood pressure

### Recommended Daily Allowance (RDA)

- Adult women age 19 - 50, 1,000 mg
- Adult women age 51 - 70, 1,200 mg
- Adults over age 70, 1,200 mg

### Tolerable upper limits

- Age 19 - 50, 2,500 mg
- Age 51 and over, 2,000 mg

## Osteoporosis

Osteoporosis is a disorder in which bone becomes weak and brittle. People with osteoporosis have an increased risk for broken bones. Osteoporosis may develop if your body doesn't get enough calcium.

### People at higher risk for osteoporosis

Post-menopausal women

Small-boned women

Fair-skinned women of Northern European origin

People who are physically inactive

People with a family history of osteoporosis

People who consume alcohol and/or caffeine

People who use tobacco

### Factors that increase calcium absorption

Lactose

Calcium deficiency

Vitamin D

Pregnancy and lactation

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### Factors that decrease calcium absorption

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Fiber	Vitamin D deficiency
Oxalate	Menopause
Alcohol	Old age

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### Calcium supplements

Some people may need a calcium supplement because they don't get enough calcium from the foods they eat. Calcium carbonate is the least expensive supplement, and it contains the highest amount of calcium per tablet.

Calcium carbonate is available under the brand names OS Cal® and Caltrate®, or as a generic calcium carbonate. Calcium also can be found in Tums®, an over-the-counter antacid.

The ingredient label on the back of the product lists the calcium content. Your body can only absorb 500 milligrams of calcium at a time, so do not take more than 500 milligrams in one serving.

### Vitamin D

Vitamin D is a fat-soluble vitamin that is stored in the body's fatty tissue. It's also called the "sunshine vitamin" because the body makes vitamin D after being in sunlight.

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### Vitamin D helps

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- Promote calcium absorption
  - Form and maintain strong bones
  - Maintain the proper phosphorus levels in blood
  - Prevent rickets, an abnormal distortion of the bones
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### Recommended Daily Allowances (RDA)

- For adults age 19 to 70, 15 micrograms (mcg) or 600 international units (IU)
  - For adults over age 70, 20 mcg or 800 IU
  - Tolerable upper limit for any age, 4,000 IU
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### Risk factors for vitamin D deficiency

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Age 50 or older	Infrequent exposure to sunlight
Darker skin tones	

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### Vitamin D supplements

Vitamin D is needed to help your body absorb calcium. If you are not consuming the RDA for vitamin D, you should talk with your physician\* about taking a daily supplement. Vitamin D supplements are available over the counter from your local drug or vitamin store.

## FOODS RICH IN VITAMIN D

INTERNATIONAL UNITS  
(IU) PER SERVING

PERCENT DAILY VALUE

Cod liver oil, 1 tablespoon	1,360	340
Salmon, cooked, 3½ ounces	360	90
Mackerel, cooked, 3½ ounces	345	90
Sardines, canned in oil, drained, 1¾ ounces	250	70
Tuna fish, canned in oil, 3 ounces	200	50
Milk, non-fat, reduced-fat or whole, vitamin D fortified, 1 cup	98	25
Margarine, fortified, 1 tablespoon	60	15
Pudding, prepared from mix and made with vitamin D fortified milk, ½ cup	50	10
Ready-to-eat cereals fortified with 10% of the DV of vitamin D, ¾ cup to 1 cup (serving size varies according to the brand)	40	10
Egg, 1 whole (vitamin D is found in egg yolk)	20	6
Liver, beef, cooked, 3½ ounces	15	4
Swiss cheese, 1 ounce	12	4



# Day of surgery

## For patients having surgery at Central DuPage Hospital

### **Arrival and parking**

Use Entry 1 on Jewell Road (see map on page 4) and enter the hospital at the East Entrance. Valet parking, available starting at 5 am, is complimentary and recommended the day of surgery. Wheelchairs are available if needed.

### **Check-in and registration**

The Surgical Services check-in and registration area is on the second floor. You and your family/friends will wait there until you are taken to the pre-operative holding area. We ask that only one family member accompanies you to this area.

### **Waiting room**

During your surgery, your family/friends may wait in the surgery waiting room. The patient tracking board provides up-to-date progress information to your family. Your surgeon\* will speak with your family when your surgery is over.

## For patients having surgery at Delnor Hospital

### **Arrival and parking**

Use Entry 1 on Williamsburg Road (see map on page 5) and take Delnor Drive to the South Entrance. Wheelchairs are available if needed. Valet services are available at the South Entrance starting at 7 am.

### **Check-in and registration**

The surgery registration desk is located near the South Entrance through the corridor on the right. There is a concierge at the South Entrance to direct you. You and your family/friends will wait there until you are taken to the pre-operative holding area. We ask that only one family member accompanies you to the holding area.

### **Waiting room**

During surgery, your family/friends may wait in the surgical waiting room. The family liaison, our volunteers, and the patient tracking board will provide up-to-date progress information to your family. Your surgeon\* will speak with your family when your surgery is over.





### **Recovery room**

The average length of stay in the recovery room is two hours. The medications used in anesthesia may cause you to have blurry vision, a dry mouth, chills, nausea and/or a sore throat. When you are stable, you will be transferred to your room. Once awake, you will be encouraged to breathe deeply and cough. This will help clear out your lungs and prevent pneumonia.

### **Food and fluids**

After surgery, you will be able to have ice chips if you are not sick to your stomach. You can progress to solid food when you and your surgeon\* feel you are ready.

### **Visitors**

On the day of surgery, we suggest that you keep visitors to a minimum and limit the amount of time they stay. You may feel very drowsy from the medications.

### **Privacy**

To protect your privacy after surgery, you will be requested to communicate directly with your family and friends regarding your condition. You will be asked to choose a password to protect your privacy if you are unable to update your family/friends yourself. Please advise family and friends they will need to provide the password to a nurse in order to obtain updates on your condition.

# Your hospital stay

You are the most important member of your care team. In order to maximize your recovery, we ask that you:

- Provide information to your care team
- Educate yourself about your plan of care
- Know the medications you are taking
- Express questions and concerns
- Tell your care team how you are feeling

## After surgery

You may be discharged on the day of surgery, or you may stay up to 3 days, depending on how your recovery progresses. Your care team will continue to closely monitor you after your surgery. They will check the color, movement and sensation in your arms and legs. They will orient you to your new environment.

Your nurse will create a plan of care to meet your individual needs and work with other members of the care team.

Your patient care technician (PCT) will assist you with activities of daily living, such as bathing, turning in bed and toileting.

Your care coordinator will assess your discharge needs, handle any insurance issues, and arrange for services and equipment you may need after discharge.

## Activity and positioning

Your nurse and/or physical therapist will assist you with sitting up in bed, standing and walking while you are in the hospital. These activities will begin on the day of surgery when possible.

## Your brace or corset

After surgery, you may need to wear a brace or corset. You or your caregiver will be expected to be able to remove it and put it back on correctly. Your surgeon\* will determine how long you will need to wear it.

## Therapy

Therapy is one of the most important parts of your recovery. You will begin therapy soon after your surgery. Your surgeon\* and the rehabilitation staff will work together to develop an individualized therapy plan for you.



Pain management is important for your rehabilitation. See page 18 for more information.

During your therapy sessions, you will learn your surgeon's\* specific spine precautions, how to put on and take off your brace, and proper positioning in bed and a chair. You will also learn how to accomplish your activities of daily living at home. Your occupational therapist will recommend appropriate adaptive equipment as needed.

After you leave the hospital, your therapy will be based on your health status, your functional progress with your activities of daily living, physical activity tolerance with your home exercise program, and your surgeon's\* specific recommendations. Your focus should be to achieve your optimal functional level within your home or as an outpatient.

#### **Ice for swelling and pain**

Your occupational therapist or nurse staff will provide ice packs to manage swelling if it occurs. You or your caregiver will place the ice pack(s) on your spine. This may also assist in pain management.

#### **Bowel and bladder**

Some people find it difficult to urinate after surgery because of the anesthesia, pain medication and decreased mobility. Let your healthcare provider know if you have difficulty urinating after surgery.

Constipation can also become a problem after surgery. To prevent constipation, drink a lot of fluids and eat foods high in fiber. A stool softener or laxative may be given to you.

#### **Incision care**

Your incision will be covered by an adhesive bandage. Depending on your surgeon's\* order, the bandage will be changed one or two days after your surgery with a smaller one. Your wound should be kept clean, dry and covered. You will receive incision care instructions from your nurse when you are ready to leave the hospital.

#### **Respiratory care**

After surgery, secretions can collect in the lungs and lead to pneumonia. To help prevent this, we will teach you to breathe deeply and cough, and to a hand-held breathing device in your room, which will help you fill the tiny air sacs in the bases of your lungs. The deep breathing also helps break up any mucus so you can "cough it out."

#### **Circulation**

Lack of activity causes blood to move more slowly and pool in your legs. Walking will reduce your risk for blood clots and enhance your recovery. Therefore, it is important for you to walk (**with the help of staff**) as soon as you are able. Set a goal to walk to the bathroom, then to the door, and then in the hall.

Your surgeon\* may order intermittent compression cuffs for you to wear. These will gently squeeze your legs when you are inactive in order to promote blood flow. Blood thinners may also be prescribed.

# Managing your pain

Pain is experienced by people of all ages and can occur anywhere in your body. Feelings can vary from dull aches to severe sensations. You have the right to have your pain assessed and treated.

Controlling your pain is important for you to be able to participate in rehabilitation and recovery. Be sure to communicate with your care team about your pain.

## Pain rating scale

To make you as comfortable as possible, we will regularly ask you to rate your level of pain using a numeric scale (see below). The scale is from 0 to 10, with 0 being no pain and 10 being the worst pain possible. We are committed to helping you manage your pain throughout your stay.

## Comfort-function goal

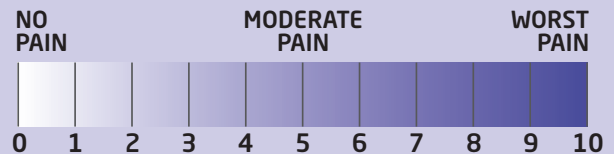
In order to perform your daily activities, you will need to set a goal for managing your pain. Your comfort-function goal should be a pain rating that allows you to continue your important activities.

To help set your goal, consider:

The daily activities you need to do after surgery, such as coughing or breathing deeply, to prevent complications

The pain rating that will allow you to manage those activities comfortably

**Your caregiver will help you set a comfort-function goal and answer questions about the pain rating scale.**





# Discharge instructions

Preparation for your discharge actually started the day your surgery was scheduled. Your care team works with your surgeon\* and primary care physician\* to ensure a timely discharge.

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Most patients are discharged home after surgery. Before you are discharged home, you should be able to:

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Comply with spinal precautions.

Put on and take off your brace independently (if indicated by surgeon\*).

Walk more than 100 feet with standby assistance, with or without an assistive device (dependent on surgeon\*).

Go from lying down to sitting up using the log roll method with supervision.

Go up and down 3 to 5 steps with standby assistance and a railing (if you have stairs at home).

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If you are unable to achieve the therapy goals that are set, you may be discharged to an inpatient rehabilitation facility for further recovery. Your care coordinator will work with you to make those arrangements.

## Incision care at home following spine surgery

Your incision will be closed on the outside by one or more of the following:

Staples	Steri-Strips®
Dermabond	Sutures or "stitches"

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When you are discharged from the hospital, these will still be in place. You will need to keep the incision clean and dry. If Steri-Strips are present, keep them in place until your next appointment with your physician.\* If the ends come loose and curl up, they may be trimmed off, leaving the remaining Steri-Strips in place.

Each day, change the dressing that covers your incision, as directed by your surgeon,\* until your first post-operative visit.



## Leaving the hospital

You will likely be discharged to your home once your physicians\* and care team determine you are ready to leave the hospital. We strongly recommend you have someone stay with you for at least one week after your discharge to help ensure a safer recovery.

During your recovery at home, visitors are encouraged as long as they are free from infection or illness. Visits will give your caregiver/coach a break and allow you quality time with family and friends.

After discharge, you will embark on your next level of rehabilitation.

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# Outpatient physical therapy

Check with your surgeon\* to see if and when you will need to schedule outpatient physical therapy. In most cases, physical therapy will not begin until 6 to 8 weeks, or longer, after surgery.

If you choose to seek physical therapy services through Northwestern Medicine, your therapist will have ready access to your electronic medical record and seamless communication with your surgeon\* and primary care physician.\* However, you may choose another provider outside of the Northwestern Medicine system.

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## When selecting your provider, consider the following:

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Is the person performing therapy a licensed therapist, or only a trainer/instructor?

Will you have therapy with the same individual throughout your rehabilitation?

How will this person communicate your progress to your surgeon?\*

Does this person have access to your medical records?

What type of accreditation does this outpatient facility have? How long has it been treating patients?

What is the most common type of treatment performed at this facility?

How much experience do they have with spine surgery? How many patients have they treated following spine surgery?

Do they have people to park your car or assist you in bad weather?

Do they have evening and weekend appointment times?

Is this facility in your insurance network?

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## **Pain management during physical therapy**

It is important to have adequate pain management to reach your optimal functioning level but still be able to exercise. If you haven't had any pain medication within three hours of your scheduled therapy session, we suggest you take some at least 30 minutes before you begin exercising.

With time, you should be able to decrease the amount of pain medication you take. Talk to your therapist about your pain level and the need for medications if pain doesn't decrease after several weeks.

# Healing and infection

There are many steps you can take to promote healing and help avoid infection after surgery.

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## Here are a few suggestions:

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Keep your incision clean and dry.

Do not shower until directed by your surgeon.\*

You may wash the area gently with soap and water and pat dry after your first office visit. If you have staples, you may be asked to wait another couple of days after they are removed before showering.

Do not apply lotion or ointments to your incision unless directed by your surgeon.\*

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## You may experience the following:

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Bruising and swelling near and below the incision

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Understand the signs of infection, and notify your surgeon\* if you notice any of the following:

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Separation of incision line at any point

Increased temperature greater than 101 degrees or chills

Increased redness, swelling or warmth of the skin around the incision

Unusual or increasing pain at the incision site

Red streaks on the skin near the incision site

Tender bumps or nodules in your armpits or groin

Foul smell from the incision

Pus leaking from the incision

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### **Avoiding infection after surgery**

Bacteria can be introduced into your bloodstream in any number of ways. Once in the bloodstream, the bacteria can travel to your surgical site. It is even possible that a surgical site infection can start from a sore throat, UTI, deep cut or an ear infection. Certain tests or treatments you may undergo, such as dental care, urological care, and colonoscopy, can place you at greater risk for developing an infection, even years after surgery.

You may need tests or diagnostic procedures that can place you at a greater risk for developing an infection, even years after surgery. The most common healthcare situations you may encounter that can cause an infection are dental care, urological care and colonoscopy.

### **Dental care**

Dental care after surgery can introduce bacteria into your bloodstream through cuts and trauma to the gums and gum lines. In anticipation of this risk, your surgeon may recommend taking a one-time dose of antibiotics just prior to any dental work.

Ask your surgeon\* if you need an antibiotic before dental care. Your surgeon\* will give you specific instructions and a directive about how long to follow them. Also, make sure your dentist and dental hygienist are aware that you have had spine surgery.

### **Urological care**

Invasive procedures involving the urethra, bladder, ureters or kidneys are other ways that bacteria can enter your system and contaminate your bloodstream. Needle biopsies of the prostate are included in this risk.

Under normal circumstances, the body can usually fight off potential infection associated with these procedures. However, that's not necessarily true after spine surgery. Make sure to inform any medical personnel about your spine surgery before they perform an invasive urological procedure. More importantly, make sure you discuss any urological procedure with your surgeon\* before undergoing such a procedure. Your surgeon\* will provide specific recommendations for you, and tell you how long after the procedure to follow them.

### **Colonoscopy**

Routine colonoscopy screenings are important, but a colonoscopy can potentially introduce bacteria into the bloodstream and eventually your surgical site. Speak with your surgeon\* and gastroenterologist about the precautions you will need to take before undergoing a colonoscopy.

# Understanding blood clots

A blood clot is a potential complication following surgery. Your care team will take steps to help prevent blood clots from developing, such as helping you walk, applying compression cuffs to your legs and, in some cases, prescribing a blood thinning medication.

You can help increase your blood circulation by flexing and extending your feet while tightening your leg muscles.

Blood clots can be life-threatening, so it's important to understand how they can develop and what symptoms to be aware of.

## **Deep vein thrombosis (DVT)**

DVT is the formation of a blood clot within a deep vein, commonly the calf or thigh. The blood clot can either partially or completely block the blood flow in the vein.

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DVT can result from leg inactivity brought on by:

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Surgery and reduced mobility

Badly broken leg bones or other trauma

Immobility or being bedridden

Cancer

Myocardial infarction (heart attack) or congestive heart failure

Severe infection

Pregnancy

Use of oral contraceptives

Decreased circulation

Prior DVTs

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### **DVT signs and symptoms**

Because DVT can produce life-threatening complications, it is important for you to know and be able to recognize DVT symptoms. Any or all of the following can be symptoms of DVT. If you notice any of them, call your surgeon\* immediately.

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#### Signs and symptoms of DVT

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- Swelling in the calf or thigh area
  - Pain in the calf area or behind the knee
  - Increased pain with standing or walking
  - Warmth/redness/tenderness in the affected area
  - Low-grade fever
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DVT can also occur without any of the above symptoms.

### **Pulmonary embolism (PE)**

The most common and serious complication of DVT is a PE. A PE occurs when a blood clot breaks free from a vein wall and travels to the lung, where it blocks an artery.

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#### Signs and symptoms of a PE

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- Sudden onset of chest pain
  - Sudden unexplained cough or coughing up blood
  - Shortness of breath
  - Lightheadedness, dizziness or cold sweats
  - Feelings of restlessness or anxiety
  - Rapid heartbeat
  - Sense of impending doom
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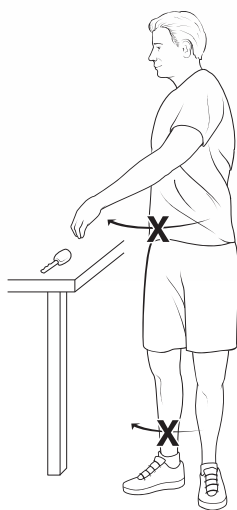
A PE is life-threatening and requires immediate medical attention.

# Safety precautions

Basic tasks require you to use safety precautions and procedures to prevent injury while you are recovering.

## Spinal precautions

No bending, lifting or twisting.



## Lifting restrictions

Do not lift more than five to 10 pounds (about the weight of a gallon of milk).

## Wear your brace as instructed by your surgeon\*

Your brace or corset is used to keep your spine immobile so you can heal. It should be worn at all times when out of bed.

## Getting in and out of bed

“Log roll” when you get in and out of bed by moving your shoulders and hips together in one motion. Avoid twisting.

## Sleep positioning

Do not sleep on your stomach. Use a pillow in between your legs when you are sleeping on your side. Use pillows under your knees when sleeping on your back.

## Home modifications

Remove clutter and area rugs from floors, and keep rooms well-lit.

## Positioning

Move around and/or change position every hour while you are awake, and do not sit for longer than 20 minutes.













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[nm.org/ortho](http://nm.org/ortho)