

Your Guide to **Spine Surgery**





Welcome to The Christ Hospital Joint & Spine Center

Thank you for choosing The Christ Hospital Joint & Spine Center. Our team of physicians, physician assistants, nurses, physical and occupational therapists and other professionals offer specialized care to patients undergoing spine surgery. We believe strongly in a patient and family centered approach to care and value you - the patient and your family, as important members of the care team.

At The Christ Hospital we embrace a patient- and family-centered model of care, which means you and your family are included in your treatment decisions. We welcome your family during your stay and have open visiting hours, because we know that having loved ones nearby is important to the healing environment.

This booklet will provide you with valuable information regarding preparation for your spine surgery procedure, including how to prepare for your surgery, what to expect while you are in the hospital and what to expect once you have returned home. Should you have any questions regarding your Pre-Surgery testing, discharge planning or during your hospital stay, please contact our Navigator at **513-557-4881**.

Again, thank you for choosing The Christ Hospital Joint & Spine Center for your spine surgery procedure.

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Did you know that approximately 8 out of 10 Americans will suffer neck or back pain at some point in their life? While most will go on to recover on their own, for some people surgery may be necessary. Patients undergoing spine surgery often have a level of pain they are no longer able to tolerate. Others may have additional symptoms such as nerve compression, which may produce numbness, tingling or weakness. The goal of surgery is to relieve pain, restore independence and return you to work or daily activities.

Most patients having spine surgery recover quickly. Generally, patients can return to driving within a few weeks, once the physician has approved it; return to sedentary jobs and activities in three to four weeks; and return to other physical activities in six to 12 weeks. Patients undergoing more complicated operations such as lumbar spinal fusion, may require three to six months to return to full activities.

The Joint & Spine Center has developed a comprehensive planned course of treatment. We believe that you, the patient, and your family play a key role in ensuring a successful recovery. Our goal is to involve you in your treatment through each step of the program. We have also developed information specifically for family members to aid in your recovery

process. Your family member or caregiver play an important role in your care and recovery and we strongly encourage them to be available as much as possible. This Guidebook provides the information needed to maximize a safe and successful surgical experience.

Our team of nurses, patient care assistants, physical and occupational therapists and orthopedic and neurosurgeons all specialize in spine care. We have developed a detailed program, from pre-operative teaching to post-operative exercises, in order to provide patients with the best care possible.

Features of the Center's program include:

- Nurses and therapists who specialize in the care of spine surgery patients
- Emphasis on individual care
- Family and friends participating as caregivers in the recovery process
- A nurse, case manager or social worker who facilitates discharge planning
- A comprehensive patient Guidebook to follow pre-op and beyond

Using the Guidebook

Preparation, education, continuity of care, and a pre-planned discharge are essential for optimum results in spine surgery. Communication is essential to this process. This Guidebook is a communication tool for patients, physicians, physical and occupational therapists and nurses. It is designed to educate you so that you know:

- What to expect every step of the way
- What you need to do
- How to care for yourself after spine surgery

Remember, this is just a guide. **Your surgeon, physician assistants, nurses, or therapists may add to or change any of the recommendations.** Always use their recommendations first and ask questions if you are unsure of any information. Keep your Guidebook as a handy reference for at least the first year after your surgery.

Parking for The Joint & Spine Center

The Christ Hospital offers a number of free, convenient parking options including the P1 and P3 parking garages and P2 parking lot. For easiest access to the Joint & Spine Center, we recommend parking in P1 or P2. To get to either P1 or P2, turn off of Auburn Avenue onto Huntington Place or Mason Street.

In addition to self-parking, valet service is available for a small fee at the Joint & Spine Center entrance. Please see the valet attendant for assistance.

P1

PARKING FOR:

Main hospital
Joint & Spine Center
Medical Office Building

ACCESS:

Turn from Auburn Ave. onto Huntington Place or Mason St. From the P1 Parking garage, take the skywalk on Level 1 toward the hospital. Turn left at the end of the skywalk into the Joint & Spine Center.

CLEARANCE: 8'

P2

PARKING FOR:

Joint & Spine Center

ACCESS:

Turn off of Auburn Ave. onto Huntington Place or Mason St. From the P2 parking lot, cross Mason St. and enter the Joint and Spine Center main entrance on Level C.

VALET

PARKING FOR:

Joint & Spine Center

ACCESS:

Turn off of Auburn Ave. onto Mason Street and proceed through the first STOP sign. Valet will be on the right in front of the Joint & Spine Center. Hours for valet 5 am -4 pm

For assistance with directions, contact Patient & Guest Services at

513-585-1200

or visit TheChristHospital.com.



Common Terms

Anterior – A relative term indicating the front of the body.

Bone Spur – An abnormal growth of bone, usually present in degenerative arthritis or degenerative disk disease.

Cartilage – A smooth material that covers bone ends of a joint to cushion the bone and allow the joint to move easily without pain.

Congenital – Present at birth.

Cervical Spine – The part of the spine that is made up of seven vertebrae and forms the flexible part of the spinal column. The cervical spine is often referred to as the neck.

Degenerative Arthritis – The inflammatory process that causes gradual impairment and loss of use of a joint.

Degenerative Disc Disease – The loss of water from the discs that reduces elasticity and causes flattening of the discs.

Disc – The complex of fibrous and gelatinous connective tissues that separate the vertebrae in the spine. They act as shock absorbers to limit trauma to the bony vertebrae.

Discectomy – The complete or partial removal of the ruptured disc.

Dura – The outer covering of the spinal cord.

Dural Tear – A laceration or tear of the dura that can occur during surgery. Leakage of spinal fluid occurs at this site. This is often treated with bed rest for 24–48 hours thus allowing the tear to heal.

Facet – The small plane of bone located on the vertebra.

Foramina – Plural form of foramen (a natural opening or passage through a bone).

Foraminotomy – The surgical procedure that removes part or all of the foramen. This is done for relief of nerve root compression.

Fracture – A break in a bone.

Fusion – The surgical procedure that joins or “fuses” two or more vertebrae together to reduce movement at this joint space.

Herniated Disc – The abnormal protrusion of soft disc material that may impinge on nerve roots. Also referred to as a ruptured or protruding disc.

Joint – Where the ends of two or more bones meet.

Lamina – Part of the vertebrae that connects the spinous process to the transverse process.

Laminotomy – The removal of a small portion of the lamina.

Laminectomy – The removal of the entire lamina.

Ligaments – Flexible band of fibrous tissue that binds joints together and connects various bones.

Lumbar Spine – The portion of the spine lying below the thoracic spine and above the pelvis. This part of the spine is made up of 5 vertebrae. Also called the lower back.

Myelopathy – A condition that is characterized by functional disturbances due to any process affecting the spinal cord.

Nerve Root – The portion of a spinal nerve that lies closest to its origin from the spinal cord.

Neuropathy – A functional disturbance of a peripheral nerve.

Nucleus Pulposus or Nucleus – The relatively soft center of the disc that is protected by the rigid fibrous outer rings.

Osteoporosis – Loss of bone density.

Osteophyte – A bony outgrowth.

Paresthesia – An abnormal touch sensation, such as burning or tingling.

Posterior – A relative term indicating that an object is to the rear of or behind the body.

Radiculopathy – A condition involving the nerve root that can be described as

numbness, tingling or pain that travels along the course of a nerve.

Sacral Spine – The last section of the spinal column located below the lumbar spine. It is made up of several semi-fused pieces of bone.

Sciatica (also called lumbar radiculopathy) – A pain that originates along the sciatic nerve.

Scoliosis – A lateral, or sideways, curvature and rotation of the back bones.

Spinal Stenosis – A narrowing of the vertebral canal, nerve root canals, or intervertebral foramina of the spine caused by encroachment of bone upon the space. Symptoms are caused by compression of the nerves and include pain, numbness and/or tingling,

Spinous Process – The part of the vertebrae that you can feel through your skin.

Spondylosis (spinal osteoarthritis) – A degenerative disorder that may cause loss of normal spinal structure and function. Although aging is the primary cause, the location and rate of degeneration is individual. The degenerative process of spondylosis may impact all of the spine creating over growth of bone and affecting the intervertebral discs and facet joints.

Spondylolisthesis – A forward displacement of one vertebra over another.

Stress fracture – A bone injury caused by overuse.

Thoracic Spine – The portion of the spine lying below the cervical spine and above the lumbar spine. This part of the spine is made up of 12 vertebrae.

Transverse Process – The wing of bone on either side of each vertebra.

Vertebra (e) – The bone or bones that form the spine.

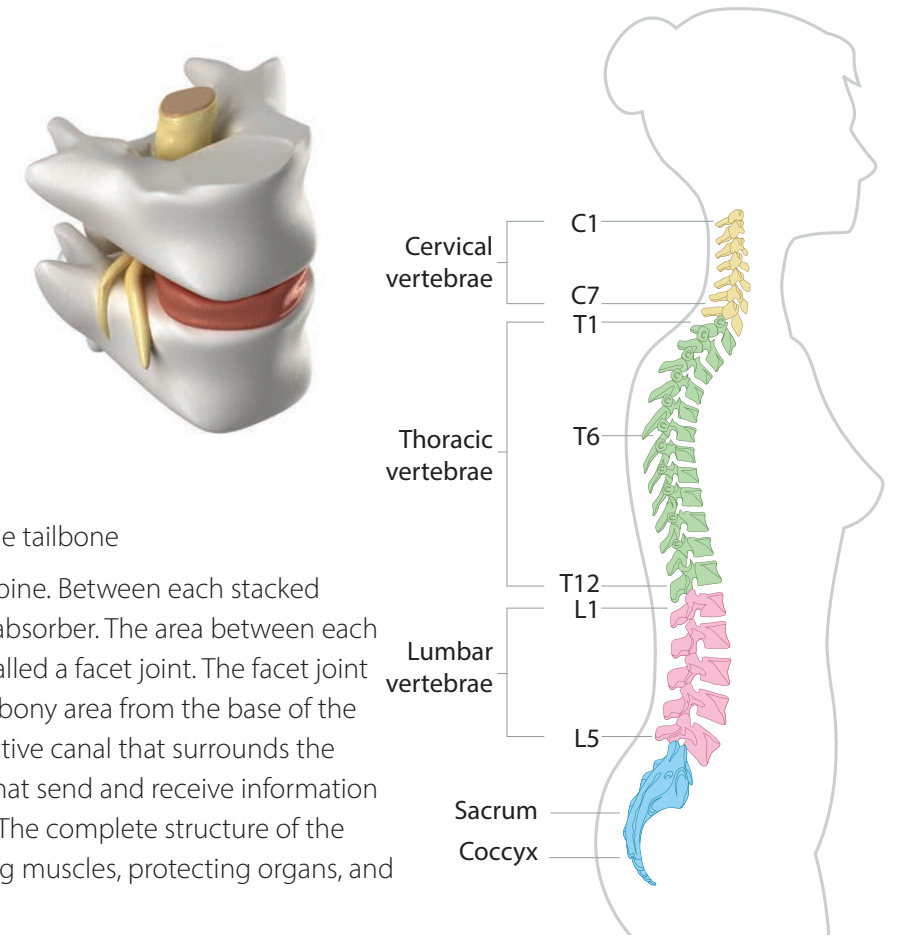
Spine Anatomy

Introduction to Spine Anatomy

The spine is made up of 5 parts:

- Neck (cervical)
 - 7 bones (vertebrae), C1-C7
- Chest/mid-back (thoracic)
 - 12 bones (vertebrae), T1-T12
- Low back (lumbar)
 - 5 bones (vertebrae), L1-L5
- Sacrum
 - 5 jointed bones
- Coccyx
 - 4 jointed bones, also known as the tailbone

There are 33 bones (vertebrae) in the spine. Between each stacked bone is a soft disc that acts as a shock absorber. The area between each vertebra on the left and right sides is called a facet joint. The facet joint allows for movement in the spine. The bony area from the base of the neck to the low back level is the protective canal that surrounds the spinal cord. Each vertebra has nerves that send and receive information for sensation (feeling) and movement. The complete structure of the spine protects the spinal cord, attaching muscles, protecting organs, and providing upright posture.



Advance Directives

PUT YOUR HEALTH-CARE DECISIONS IN WRITING

There are different types of Advance Directives:

- **Living Will** - A notarized document signed by an adult with decision-making capacity which contains his/her wishes about the use of life-sustaining treatments. This is only effective when the patient is in a terminal condition or permanently unconscious state.
- **Durable Power of Attorney for Healthcare** - A document signed by an adult with decision-making capacity which appoints a person to make healthcare decisions for the patient when the patient cannot make decisions.

- **Ohio DNR- (Do Not Resuscitate)** - A physician's order that makes it known that a patient does not want cardiopulmonary resuscitation performed. There are two options: DNR Comfort Care (DNRCC) or DNR Comfort Care-Arrest (DNRCC-Arrest)
- Advance Directives completed in other states shall be honored so long as the form complies with Ohio laws.

REVIEW “EXERCISE YOUR RIGHT”

On admission to the hospital, you will be asked if you have an advance directive. If you do, please bring copies of the documents to the hospital with you, so they can become part of your medical record. If you do not have any advance directives but would like to receive information or obtain an advance directive, we can contact pastoral services to assist you with the process during your stay. If you would like a DNR order please contact your physician. Advance directives are not a requirement for hospital admission.

Pre-Surgery Checklist

Prior to your surgery, there are a number of preparations that you should make to help ensure a positive outcome. Please review this check list carefully. If you have any questions about this Pre-Surgery Checklist or about your procedure, please contact The Spine Navigator at 513-557-4881 or your surgeon's office.

One month prior to surgery

Confirm the date for the surgery. This date will generally be scheduled through your surgeon's office.

Confirm date of surgery _____ at _____ AM/PM.

BECOME SMOKE FREE

If you are a smoker, you should stop using tobacco products. The tar, nicotine and carbon monoxide found in tobacco products have serious adverse effects on your blood vessels and thus impair the healing of wounds and bone grafts. In addition, continued tobacco use damages the other discs in your spine, leading to disease at other levels. Finally, we have found that smokers experience a greater degree of pain than do non-smokers.

ATTEND PRE-SURGERY SPINE CLASS

Call 513-557-4881 or email SpineCare@thechristhospital.com to schedule your pre-surgery spine class. It is important to have your family or caregiver view or attend class.

PRE-OPERATIVE VISIT TO SURGEON

At your visit with the surgeon, you will discuss the treatment options and if surgery is being planned. You will sign a consent for surgery and receive information to help prepare you for surgery. Surgery will be scheduled while at the office or in a few days. A scheduler will call from the office to let you know the date of surgery and schedule your nurse assessment appointment with Pre-surgery Testing Dept. (PST).

Brief Pre-Surgery Checklist

Use this checklist to help you prepare for your upcoming surgery. Refer to the following pages to read more information about each of these items.

- Complete pre-surgery office visit with your surgeon. A visit also may be required with an ENT or vascular surgeon
- Attend a pre-surgery Spine Class – in person or virtual
- Complete pre-surgical testing/lab work, minimum 7 days prior to surgery but within 30 days of surgery
- Review your medications with your surgeon and PST nurse and **follow instructions to stop certain medications**
- History and Physical must be completed within **30 days of surgery** by your Primary Care Provider or a Nurse Practitioner at The Christ Hospital
- Your surgeon may also require a medical consult with a cardiologist/pulmonologist to obtain clearance within **30 days of surgery**
- Ensure you have a ride home when you are discharged, and it is recommended that you have a responsible adult with you the first 48-72 hours after surgery
- Follow instructions by your surgeon for Hibiclens soap. Shower the night before surgery and day of surgery
- If given a brace pre-op, bring it with you to the hospital
- Schedule post op appointment with your surgeon

STOP MEDICATIONS THAT INCREASE BLEEDING

- Seven – 14 days before surgery, or as instructed by your medical doctor or surgeon, stop all medications containing aspirin and anti-inflammatories, such as aspirin, Motrin®, Advil®, Aleve®, Ibuprofen, Naproxen, etc. These medications may cause increased bleeding.
- If you are on Coumadin, Pradaxa, Xarelto or any drug that inhibits clotting, you will need special instructions on stopping this medication. Please contact your surgeon for these instructions.

Pre-Surgery Testing Details

Your pre-surgery testing should be done at a minimum of 7 days but within 30 days of your surgery.

You will be scheduled for a PST (Pre-Surgery Testing) phone call assessment appointment by your surgeon's office. This call is to review your medications (please have a current list available) and your medical history. They will review instructions and schedule you for any required testing for your surgery. If you need to reschedule your PST phone call assessment, please call the department at 513-585-2418. If testing is not completed within 3 business days prior to surgery, the surgery may be delayed.

The Christ Hospital has several Pre-Surgery Testing locations throughout Greater Cincinnati. While some Pre-Surgery testing may be done at your primary care physicians' office or another laboratory, some testing may need to be completed by a Christ Hospital testing facility. In order to streamline testing and minimize the need for multiple testing visits, we recommend patients call the Pre-Surgery Testing Scheduler at 513-585-2418 to coordinate required testing.

A history and physical must be completed within 30 days of surgery with your primary care provider. Your surgeon or PCP may also require a medical consult with a cardiologist/pulmonologist/hematologist to obtain clearance within 30 days of surgery.

A current medical history and physical examination are necessary for you to receive an anesthetic. Diseases such as diabetes and heart disease do not keep you from surgery, as long as they are under control.

The physical may include an electrocardiogram (EKG) of your heart beat if medical indicated or an insulin dependent diabetic, and an analysis of blood and urine specimens. There is no special preparation for the tests. You should eat normally and take your current medications the evening before and the morning of your tests. Based on your age and medical condition additional tests may be requested.

Occasionally special X-rays or CT scans may be required prior to your surgery.

As results come in from your lab tests, a copy is sent to your surgeon's office. If there are any abnormalities that need medical attention, your surgeon's office will contact your medical doctor. Changes in EKG's may require a consultation with a cardiologist before an anesthetic can be given. For this reason, it is a good idea to have your tests done earlier rather than within a day or two of your surgery.

Some conditions may make the risk of spine surgery too great (chronic infection or a recent heart attack or stroke). If you have any infection, (including bladder, prostate, kidney, gums, skin ulcers, or ingrown toenails) it should be treated and cleared up before undergoing spine surgery.

If you have multiple medical problems or a history of difficulty following anesthesia from a previous operation, your surgeon may ask that an anesthesiologist evaluate you prior to your day of surgery. In this case you would be scheduled for an anesthesia consult with your Pre-Surgery testing.

If directed by your surgeon, you will get an anti-microbial soap called Hibiclens or Chlorhexidine to wash your body (excluding hair, face, and private area) at your Pre-Surgery Testing appointment. If you do your Pre-Surgery Testing at another facility other than The Christ Hospital, you can purchase a bottle of Hibiclens at any drug store, like Walgreens or CVS.

Pre-Surgery Testing Details, *continued*

ONE WEEK PRIOR TO SURGERY

- Report important observations or changes in your health. If you have any changes in your physical condition such as a fever, sore throat, abscess, persistent cough, ulcer, nausea, vomiting, diarrhea, and you question your readiness for surgery, consult your primary care physician to assess and treat.
- If there is an important change to the skin or a rash where the surgery is to be performed, notify the surgeon's office as soon as possible. An important change would be an open draining wound or a localized area with swelling, redness, heat, tenderness to touch, pain or pressure.

TWO DAYS PRIOR TO SURGERY

- Take necessary measures to ensure a good bowel movement the day before your surgery. If you have no history of bowel problems, you can typically assure this with your diet. You may take a laxative or suppository of your choice two days before your scheduled surgery if you tend to need this type of treatment regularly, or on a periodic basis. Over-the-counter products are sufficient. The majority of people do not need to give themselves an enema. After your surgery, you will be given liquids and food as your stomach allows. Most people are back on a regular diet the day of surgery.
- Do not drink any alcohol for 48 hours prior to surgery, as this delays emptying of the stomach.

DAY BEFORE SURGERY

- Make sure you drink 8 glasses (2 quarts) or more of fluids, such as Gatorade or a similar product, preferably not just plain water unless instructed otherwise. Do not drink red or orange colored liquids or jello.
- You may eat a snack before you go to bed if it is before midnight.
- Take a shower using Hibiclens soap, please follow the instructions provided per your surgeon. Be sure to pay special attention to skin folds. It is not necessary to use the soap on your face, hair, or genital area. Do not apply lotions or deodorants after your shower on the day of surgery.
- DO NOT drink alcohol, including beer or wine.
- DO NOT shave the surgical area at home.

DAY OF SURGERY

- DO NOT smoke.
- DO NOT chew gum.
- DO NOT eat any type of hard candy.
- You may have clear liquids up to four hours prior to surgery time. Do not drink red or orange colored liquids or jello.
- Medications may be taken as instructed by the hospital assessment nurse on the morning of surgery.
- The morning of surgery, shower your body again, including the surgical site before going to the hospital with the Hibiclens.
- Wear comfortable loose fitting clothes.
- Leave valuables, including jewelry, at home.
- If you have an insulin pump for diabetes, bring in your supplies on the day of surgery.
- Bring only necessary personal items with you to the hospital.

Surgery and Your Current Medication



A Pre-Surgery Assessment Nurse will call you to review your medications and instruct you regarding what medications may be taken the morning of surgery or may need to be discontinued. Written instructions will also be given at your Pre-Surgery Testing visit or faxed to your primary care physician if that is where your Pre-Surgery Testing is being done. You can reach the Assessment Nurses at **513-585-1720**.

If you see a specialist, such as a cardiologist, pulmonologist, oncologist, endocrinologist, you will be asked to check with them before discontinuing your medications. It is important to check with your primary care physician or cardiologist before discontinuing, blood thinners and anti-platelet medications.

Traditional non-steroidal anti-inflammatory medications (NSAIDs - pronounced EN-seds) such as Aleve, Advil, Ibuprofen, Naproxen, Mobic, and Diclofenac should be stopped seven days prior to your surgery. The Cox-II non-steroidal (i.e. Celebrex) does not need to be stopped. It is very important that you read the labels of your medications carefully to be sure you know the ingredients of each. Sometime medications may be labeled by their commercial names and some by their chemical (generic) name. These medications can be re-started as directed by your surgeon.

If you are on a prescription pain medication, you will likely be able to continue taking that prescription medication until the day of surgery. Acetaminophen (Tylenol) is the only over-the-counter pain medication which is safe to take one week prior to your surgery.

Aspirin or aspirin-containing drugs such as Percodan, Excedrin, or Anacin, should be stopped seven days prior to your surgery. It is very important that you read the product label carefully. If it contains aspirin, acetylsalicylic acid (ASA), or any form of salicylate, it meets the criteria to be stopped. Vitamin E and fish oil supplements should also be stopped seven days prior to surgery.

MEDICATION LIST

Please make a list of all medications you are taking, including over-the-counter medications, vitamins and/or supplements and bring this list with you to the hospital on the day of your surgery. Please include in this list:

- Medication name
- What is the dosage? How many pills do you take?
- What time do you take your medication? How do you take your medication?
- Why are you taking this medication?
- Name of physician that prescribed this medication?
- How long have you been taking this medication?

Diabetes and Surgery

BEFORE SURGERY

Managing your diabetes prior to surgery is important. Controlled blood sugars can improve healing and prevent some surgical complications. In order to determine if your diabetes is well controlled, your physician may order a blood test called hemoglobin A1C (A1C). The A1C is a blood test that measures your average blood sugar over the last two to three months. The American Diabetes Association recommends an A1C of 7% or less. Discuss your A1C results with your physician.

Tips to help you control your diabetes include:

- Take your medications as prescribed
- Eat three healthy balanced meals
- Be aware of portion sizes
- Eat whole fruit instead of drinking fruit juice (Balance fruit with protein)
- Avoid high sugar drinks such as: Gatorade, Kool-Aid, regular soda, lemonade, sweet tea
- Limit high sugar foods such as: cakes, cookies, candy, ice cream
- Be physically active (Recommend: 30 minutes 5 days a week)
- Monitor your blood sugar and discuss results with your healthcare provider

Prior to surgery a nurse will call to discuss your diabetes and medications. It is important for the medical team to know what type of diabetes (type 1 or type 2) you have. It is also very important you provide detailed information about your diabetes medications and/or insulin pump/insulin delivery device. This information will assist your physician during and after surgery to better manage your diabetes.

Make a list of all your diabetes medications and/or insulin. Include the following details:

1. Name of oral diabetes medications and/or insulin
2. Dosage of oral diabetes medication and/or insulin
3. Schedule for taking your oral diabetes medications and/or insulin
4. Manufacturer of insulin pump/insulin delivery device and type of insulin

Medication instructions on the day of surgery:

- Ask your prescribing physician if you should take your diabetes medications prior to and on the day of surgery.
- If you take insulin, you should ask your prescribing physician if the dose will be different prior to and on the day of surgery.
- If you have an insulin pump, you should ask your prescribing physician if the insulin pump settings need to be adjusted. If you have an insulin delivery device ask your physician if you can use your device during surgery.

Note: Occasionally, before/after joint or spine surgery your physician may prescribe a steroid type medication. Steroids can affect your blood sugar by making them high. Your physician will be monitoring and treating your blood sugar as needed.

DAY OF SURGERY

Your blood sugar will be monitored prior to and during surgery. If your blood sugar is higher than normal your physician may order insulin. Insulin may be administered by injection or through your IV.

AFTER SURGERY

The stress of surgery and being in the hospital may have an effect on your blood sugar.

Our goal is to check and treat your blood sugar often in the day to help keep it as normal as possible. Normal blood sugar levels can help you recover from your illness quicker, improve surgical healing and experience a shorter hospital stay.

- In order to provide good blood sugar control, your home treatment plan may not be used during your hospital stay.
- If you are currently taking pills for your diabetes, they will be stopped and you will receive insulin while you are in the hospital. National research supports stopping your oral medications and using insulin. Research has shown that using insulin in the hospital setting can help provide safe and rapid control of high blood sugar levels.



- Your blood sugar will be checked frequently.
- You will be asked to let your nurse know when you are going to eat a meal so your blood sugar can be checked and insulin can be given to you at the right time.
- You may receive more than one kind of insulin.
 - **Rapid acting insulin (Humalog)** is given before meals. It works fast to control your blood sugar after eating.
 - **Long acting insulin (Lantus)** is given daily. It works slowly to control your blood sugar throughout the day and night when you are not eating.
- If you feel shaky or sweaty, at any time, call your nurse or patient care assistant right away. These signs may mean your blood sugar level has dropped below normal. In order to find out if your blood sugar is low, the nursing staff will check your blood sugar and will provide treatment if needed.

If you are given insulin in the hospital, you may or may not have to use it at home. Ask your doctor if your home diabetes treatment plan will change. If you go home on insulin, you will be taught about your insulin plan and allowed to practice giving an insulin injection before you are discharged.

If you have an insulin pump or an insulin delivery device your physician may allow you to use your pump or insulin delivery device during your hospitalization. To safely use your pump or insulin delivery device during hospitalization you should be prepared to provide the insulin pump manufacturer, type of insulin and insulin pump settings. Insulin pump/insulin delivery device supplies are not available in the hospital. In order to use your pump you must bring your own pump or insulin delivery device supplies to the hospital.

You may request the inpatient diabetes educator to meet with you and your family. Please speak to your nurse or physician about making a referral to the inpatient diabetes educator.

Spine Surgery Preparation

PLANNING AHEAD BEFORE SPINE SURGERY Home

- De-clutter your home. Temporarily put away area rugs that may be a tripping hazard.
- Shop ahead! Have frozen dinners available to pop into the microwave and paper plates to limit washing. Also have plenty of liquids available. Pain medications can give you a very dry mouth.
- Complete needed yard work and mowing or arrange to have this done for you.
- Arrange for neighbors/family to collect mail and newspapers for a few days.
- Change your bed and have fresh linens prepared.
- Strategically place nightlights in bedrooms, hallways and bathrooms you may need to access at night.
- Place essential and frequently used items at counter level in the kitchen. This may mean taking out the items from the lower or very upper cabinets and storing them on the counter temporarily.
- Have current bills paid so you do not have to worry about these immediately after the surgery.
- Have support lined up, especially if you live alone. Arrange for friends to call on certain days or stop by and make sure you don't need any extra assistance. **For the first 48 to 72 hours up to a week depending on your surgery, it is best to**

have someone with you for assistance or supervision.

- No special chair is needed, but you want one that offers you support and comfort, preferably a chair that has arm rests and sits higher, not one that is low to the ground. Limit your sitting according to your surgeon's recommendations. If you have a recliner, you may sit for prolonged periods in a reclined position.

Pets

- Have help for the first few days to keep food and water available for pets.
- Have a dog walker planned for the first week at least. You will not want to chance losing your balance or being jerked by your excited canine friend!
- If you have cats, have the litter box up on a high table or counter so you don't have to bend down to clean it.

Points of comfort

You may want to place an extra pillow in your car for the ride home to maximize your comfort.

If you own your walker, have it in the car for the arrival home. A walker will be provided while you are in the hospital.

What to Bring to the Hospital

On the day of surgery, bring only what is essential for that day, including:

- Medical insurance card(s) and prescription card
- A list of your medication(s) including the name of each medication, dosage and frequency.
- Do not bring your own medications, unless instructed to do so by the Pre-Surgery Assessment Nurse.
- Copy of Advanced Directives (if not already in your medical record)
- Personal hygiene items (toothbrush, deodorant, etc.)
- Shorts, tops, sweats, well-fitting slippers or flat shoes
- Cotton T-shirts for under your brace, if a brace is ordered
- Any collars or braces for your neck or back
- Insulin pump and supplies



- CPAP and supplies
 - Please leave valuables including jewelry at home
- If your surgery requires a planned hospital stay, we recommend you ask your family or friends to bring your personal belongings to your room later in the day.

What to Expect on the Day of Surgery

On the day of your surgery, please go to the Joint & Spine Center and proceed to the Same Day Surgery Check-in desk located on Level B at the time your surgeon's office requested that you arrive. A designated family or friend will need to give a phone number for periodic updates regarding your surgery. The registration desk will provide information regarding how to read the patient tracking system.

Upon check in, you will be escorted to a private room on the Same Day Surgery unit to be prepared for surgery. If you choose, two visitors may accompany you to your room. While here, you will see several staff members, including nurses, your surgeon, the anesthesiologist and other patient care assistants. To ensure your identity and safety, each staff member will ask you a series of questions:

- What is your name?
- What is your date of birth?
- Do you have any drug allergies?
- What are we doing for you today?

During preparation for your surgery, an IV will be started, a nurse will scrub the surgical site with Chlorhexadine wipes, you will be given a mild sedative if ordered by the anesthesiologist as well as medications to prevent nausea and vomiting if indicated. Your surgeon will also mark the area where you are to have surgery. When you go into the operating room, the surgical team there will again ask you the same series of questions. Just before the incision is made you will be given an antibiotic through your IV, which given directly before the start of surgery has been proven to prevent surgical site infections.

Once you are taken to the operating room, your family and friends will be directed to the Family Surgical Lounge. When your surgery has been completed, your family will be contacted and your surgeon will meet with them to review the results of your procedure.

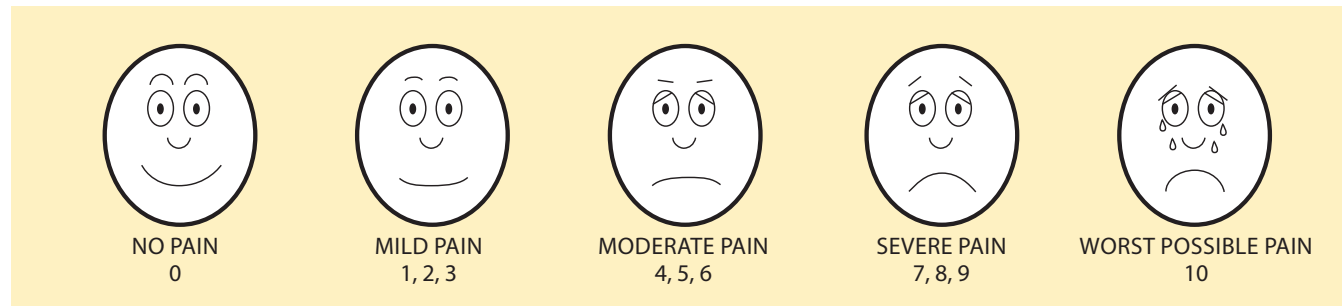


ANESTHESIA

You will meet your Anesthesiologist on the day of your surgery. Prior to this time your history and physical exam and any important information about you have been reviewed. Questions and concerns about your anesthesia or previous anesthesia experience can be discussed with the Anesthesiologist during preparation for your surgery, on the Same Day Surgery unit. The Anesthesiologist will likely order a mild sedative prior to surgery and other medications to help prevent nausea after surgery.

Understanding Pain Management

Use this pain scale to describe your pain to your nurse and surgeon.



UNDERSTANDING PAIN MANAGEMENT

It is our aim to manage your pain adequately during your hospital stay. Having said that, we realize pain management is not perfect, and that you will have some discomfort after your operation. There are several factors that limit our ability to completely eliminate pain after surgery. The first is that pain medications have side effects. These include respiratory depression (decreased ability to breathe normally), hypotension (low blood pressure), nausea and constipation. Other less common side effects include itching, urinary retention and abdominal distention (collection of gas within the intestines). These side effects mean that the amount of medication will have to be reduced at times, to avoid creating dangerous or uncomfortable conditions. Another factor is tolerance. This is the body's tendency to become less responsive to the pain-reducing action of narcotics after being exposed to them for periods of time. In other words, your body can become used to having these drugs. Unfortunately, the side effects can still be present. Patients who have taken large doses of narcotics for months or years have a much harder time keeping comfortable after surgery. For this reason, it is very important for you to provide accurate information to your surgeon about the amount of pain medication you have been taking. Inaccurate information could result in a needlessly painful and stressful post-operative experience. It may be necessary to taper or discontinue your use of narcotics prior to surgery under the direction of your surgeon.

Once you have had your surgery, we will rely heavily on your own assessment of your pain, and work with you to relieve it. Pain medication is given on an as-needed basis. **Please call the nurse when you need pain medication.** Generally, these are the same medications you will take at home once you are discharged from the hospital. Throughout your

hospital stay, your surgeon and your bedside nurses will assess your physical condition and look for signs of pain and side effects. A spine pain management nurse will also consult with your surgeon to help optimize your treatment program. Your surgeon may also order a nerve block to be given by an Anesthesiologist to help with pain control. The Spine pain nurse will discuss the nerve block if ordered and obtain your consent in the prep room prior to surgery.

TIPS FOR PAIN RELIEF AT HOME

You may be given prescriptions for pain medication when you leave the hospital. Please allow 24 hours for any needed refills. Narcotic pain medicines are not filled by the on-call physician at night or over the weekend. Narcotic prescriptions are electronically sent to your pharmacy. When you call the office for a refill, please give your name, the date and type of surgery you had, the name and dose of your medication, and the telephone number of your pharmacy.

It is important to take the medication as prescribed. Taking more tablets than directed at one time or at more frequent intervals causes some concern. If you become overly medicated, you could fall and injure your surgical site. In addition, taking too much acetaminophen can damage your liver. Discuss weaning of narcotics with your surgeon at your follow up appointments. Do not take over the counter medication or arthritis medication (also called anti inflammatory medications) without consulting your surgeon.

Ice is very helpful in pain control. Applying an ice pack for 20-30 minutes at a time can give significant pain relief. You need to put a towel between your skin and the ice pack. After 20-30 minutes your circulation goes back to normal and the therapeutic affect is lost. Putting ice on and off frequently is better than keeping it on continuously around the clock.

Information for Your Family

Once you are taken to the operating room, your family will be directed to the Family Surgical Lounge. When your surgery has been completed, your family will be contacted and directed to a private consultation room. The surgeon will meet with your family in the consultation room to review the results of your procedure.

VISITING HOURS

The Christ Hospital understands the importance of family and friends in the healing process. All rooms in the Joint & Spine Center are private rooms, and as such, we do not have visiting hour restrictions. Your family member or a significant other is welcome to spend the night and the couch in your room converts into a bed for your guest's comfort. For the most part, visitors are only limited at the patient's request.

DINING - Bistro 1889

Bistro 1889 is located on A-Level of the main hospital. To get to the Bistro 1889, take the guest elevators to Level 1. Turn left off the elevators and left down the Joint & Spine Center concourse towards the main hospital. Cross the main hospital lobby, past the information desk towards the patient elevators. Bistro 1889 is located on Level A. Carryout service is provided. Bistro 1889 is open Monday through Friday.

JOSEPH-BETH AT THE CHRIST HOSPITAL

Joseph-Beth Booksellers has a gift shop on Level 1. The store features merchandise including gifts for babies and children, inspirational items, jewelry, greeting cards, books, magazines, flowers and snacks.

Open weekdays from 7 a.m. – 8 p.m.

Open Saturday and Sunday from 10 a.m. – 5 p.m.

BANKING

Fifth Third Bank and US Bank ATMs are located in the Cafe on A, on Level A of the main hospital.

CHAPEL

The chapel is located on Level 1 of the main hospital. To get to the Chapel, take the guest elevators to Level 1. Turn left off the elevators and left down the Joint & Spine Center concourse towards the main hospital. Once you enter the main hospital go past the Welcome desk and through the doorway to your left. The Chapel will be to your right, past the

The Nourish Coffee Shop and Café is in partnership with JB Retail Collective, who manages the Joseph Beth Gift Shop at the hospital. Located on Level 1 in the hallway that runs between the front entrance of the hospital and the Heart Center elevators, Nourish is a welcoming space designed to provide a comforting environment where patients and their loved ones can take a break, recharge, and find a moment of respite during their hospital stay.

Nourish serves fresh, high-quality food and beverages such as handcrafted coffee; teas; smoothies; fresh, grab-and-go meals such as breakfast sandwiches, salads, soups, and seasonal treats.

patient elevators. It provides a quiet spot for prayer and reflection, 24 hours a day. A Catholic Mass is celebrated every day at 11 a.m., except Wednesdays. Protestant worship services are held every Sunday at 9:30 a.m.

NO SMOKING POLICY

We understand the strain this policy may place on patients and guests. Nicotine replacement and smoking cessation information are available during your hospital stay. Please ask your nurse for more information.

Recovery Room

POST-ANESTHESIA CARE UNIT (PACU)

Following surgery, you will be taken to the Post-Anesthesia Care Unit (PACU). The Minstral air warming blanket is used pre-op, intra-op and post-op for your comfort. Monitors will be applied to measure your blood pressure, heart rate and rhythm and breathing. An X-ray may be taken to check your surgery. If you experience pain tell the nurse so that they are able to help manage that pain to ensure it is tolerable for you. Pain medication and other medications like muscle

relaxers or non-steroidal medications may be used to help control pain. While you are in PACU, your family will be updated by text message or verbally after the first hour while you are in PACU. If you have been in PACU over 2 hours, your family may be asked to come to PACU for a quick visit depending on the status of the unit. The PACU is a large open room, so patients privacy is one of our top concerns. Once the anesthesia team deems you stable, you will be transported by bed to your room when it is available.

ConnectedTeam Care Virtual Nursing

OVERVIEW

You may be assigned a virtual nurse in addition to your bedside nurse. The virtual nurse is part of your care team and will work with your bedside nurse to take care of you during your stay.

PATIENT/FAMILY JOURNEY

Things the virtual nurse will be assisting me with during my stay

- My admission to a virtual nursing unit
- Rounding
- Communicating with my bedside RN/MD/etc.
- Discharge
- Bedside shift report

Virtual Knocking

You will hear a “knock” as the virtual nurse enters your room, then a caregiver will directly connect to the TV in your room.

Connecting

The equipment located above the TV will allow you and the Virtual Nurse the ability to see and hear each other during the visit.

Virtual Session

Once your session with the virtual nurse is complete, the virtual nurse will then disconnect from the TV, which will return to its prior status.



Brace and Meds to Beds

BRACE

Not all patients will require a brace after surgery. Your surgeon will determine if you need a brace. There are several types of braces that help provide support and/or limit motion to your spine. Your surgeon will also determine the appropriate type of brace for you. Instructions for wearing the brace will be individualized to meet your needs. If given a brace pre-op please bring it to the hospital the day of surgery. Please note: If you do not have a brace and your surgeon orders one, it will be provided for you at the hospital before you are discharged.

MEDS TO BEDS

YOUR PRESCRIPTIONS DELIVERED TO YOUR BEDSIDE!

Why stop at the pharmacy on your way home? The Christ Hospital's retail pharmacy, located on Level 1 by the main lobby, can fill your prescriptions before you leave and deliver them to your room!

- Payment for your prescriptions will be processed at your bedside
- No waiting at your local pharmacy to fill your prescription on the way home
- We will work with your insurance company to address and resolve issues, such as prior authorization requirements, which can delay starting your medicine
- Pharmacists are available at your bedside or by phone to answer any questions you may have about your medications, including common side effects.
- The service is FREE!

What about refills?

If you need a refill and would like to pick that up at your local pharmacy, transferring the prescription is easy. Simply take your prescription bottle to your local pharmacy and ask them to transfer the prescription. We'll do the rest!

Available Monday – Friday, 7:30 a.m. – 4 p.m.

If you would like to have your prescription filled and delivered to your bedside, please tell your nurse or call 513-585-0050.

FREQUENTLY ASKED QUESTIONS

Can my prescription be put on my hospital bill?
Unfortunately, no, we are not able to add the cost of the prescription to your hospital bill.

Do you accept my prescription insurance plan?
We accept most prescription insurance plans and will directly bill your insurance provider. You are responsible for any co-payment required by your insurance at the time of prescription delivery.

What type of payment is accepted?
We accept cash, credit cards, checks and flexible spending cards and will process your payment at your bedside when we deliver your medications.

What if I do not have my prescription insurance card?
No problem. By answering a few simple questions, we will be able to obtain this information.



Discharge Plans and Expectations

When patients are ready for discharge from the hospital, certain criteria are generally met: Patients are walking independently with or without a walker, eating and drinking well and taking oral medication to control discomfort. We suggest that you do not go home alone but have someone with you to be your caregiver for the next two to three days up to a week, depending on your surgery. This can be a friend or family member who can change your dressing, and/or monitor your incision and help you. This caregiver will also help out with meals and household activities. During these first few days at home, we want you to concentrate on your recovery. If equipment (rolling walker, bedside commode) is needed, the staff will identify the equipment for you while you are in the hospital so it can be ordered by a nurse case manager. Equipment will be delivered prior to your discharge, unless other arrangements have been made.

Most patients return directly home after surgery, but others may require a short stay in a skilled nursing facility or rehabilitation facility in order to maximize their level of independence prior to returning home. The Christ Hospital has an inpatient rehabilitation unit, which may be an option, depending upon your surgery, medical requirements and your surgeon.

You may wish to contact your health insurance carrier prior to admission, but keep in mind that insurance representatives provide only general information and not information that is specific to your post-operative needs. The services covered by your insurance company will be determined prior to your discharge.

To help plan for your post-operative care, here are some specific questions you can ask when contacting your insurance carrier:

1. a) Are there benefits for a skilled nursing facility and/or an inpatient rehabilitation facility in my policy?
b) What are these benefits?

2. a) Which local skilled nursing facilities and/or inpatient rehabilitation facilities are covered by my policy?
b) Can I get the names and locations of these facilities?

Patients are encouraged to visit skilled nursing and/or rehab facilities and provide us with their choice. A social worker will then be assigned to complete transfer arrangements during your hospital stay. It is strongly recommended that you also develop an alternate plan in the event that you do not meet the insurance company's criteria for a skilled nursing facility. Having a back up plan will insure a smooth and efficient discharge from the hospital.

The social worker will be happy to speak with you for discussion about skilled nursing and rehab facility needs prior to surgery. Please contact **513-585-2734**.

DISCHARGE GOALS

In order to be discharged, certain goals must be met to ensure it is safe for you to return home. These goals include:

- Walking in the halls with or without assistance and with or without an assistive device
- Able to climb stairs
- Tolerating a diet
- Urinating after the urinary(foley) catheter is discontinued
- Tolerating your pain medication by mouth and pain is controlled
- Vital signs are stable
- Able to pass gas

DISCHARGE TIME:

All spine patients will need a ride home from the hospital. The discharge goals need to be met before you can safely return home.

Cervical Spine Precautions

NO "B.L.T.'S" + PICKLE

No Bending

- Keep head straight and facing forward. Do not tilt the head side to side unless instructed by your surgeon. No movement forward or backwards (up and down).
- Practice optimal body mechanics by keeping your chest up, shoulders back and abdominal muscles tight. This helps maintain a neutral spine position and reduce stress on the spine.

No Lifting

- Do not lift more than 5 pounds until approved by your surgeon.
- To lift an object keep your chest upright, bend at the knees and hips and hold the object close to your body.

No Twisting

- Keep ears and shoulders and hips pointing in the same direction.
- To look behind you or to either side, you must turn your entire body. Do not just turn your head.

No Pulling

- You may push but do not pull.
- Do not pull on bed rails, chair arms or stair handrails.



Lumbar Spine Precautions

NO "B.L.T.'S" + PICKLE

No Bending

- Keep your shoulders in line with your hips. Avoid leaning forward while standing up or reaching down to the floor while you sit down.
- Practice optimal body mechanics by keeping your chest up, shoulders back and abdominal muscles tight.

No Lifting

- Do not lift more than 5 pounds until approved by your surgeon.

No Twisting

- Keep your shoulders and hips pointing in the same direction.
- To look behind you or to either side, you must turn your entire body. Do not just turn your head and shoulders.
- Do not leave your feet planted on the ground. Move your feet to look in a different direction.

No Pulling

- You may push but do not pull.
- Do not pull on bed rails, chair arms or stair handrails.

BED POSITIONING

Lying on Your Back

- Keep a pillow under your knees or thighs and under your neck when lying on your back. This supports your back and reduces stress on your spine.
- When you change positions, tighten your abdominal muscles while maintaining a normal breathing pattern and log roll keeping your hips, shoulders and ears in a straight line.



More Spine Precautions

Lying on Your Side

- With your knees slightly bent up toward your chest, place a pillow between your knees and one under your neck. This helps to keep optimal alignment of your spine.
- Remember to tighten the abdominal muscles and log roll when changing positions.
- Adding a pillow under your arm will increase comfort and further reduce stress on your spine.



Lying on Your Stomach

- Avoid this position. It places too much strain on your lower back.

BED MOBILITY

Getting Out of Bed

To move in and out of bed, you must “log roll” to prevent bending or twisting of your spine. Start by bending your knees up while lying on your back.



Push through your legs to help you roll. Roll onto your side keeping your hips, shoulders, and ears moving together to avoid twisting (i.e., roll like a log).

As you slide your feet off the bed, use your arms to push up into a sitting position. Scoot your hips forward until your feet are on the floor and you feel stable. Using your arms to help scoot typically helps minimize your surgical pain. Scoot far enough forward so your feet are flat on the floor (heels included). You may need to scoot one hip at a time.

Returning Back to Bed:

Reverse the technique for returning to bed. Back up to the bed until you feel the bed at the back of your legs. Reach for the bed with your hands as you lower to a sitting position on the bed. Scoot your hips back on the bed. The further back you scoot, the easier it will be for you to lay down on your side. As you lean down on your arm, bring your feet up onto the bed until you are lying down on your side. Then, roll onto your back keeping your shoulders, hips and ears in alignment.

WALKER

Not all patients will require a walker. Your surgeon or therapist will determine if a walker is right for you. You still need to follow the precautions and activity recommendations.

When using a walker, it is important to remember a few key rules:

- Push up from the surface you are sitting on (e.g., the bed or chair). Avoid pulling on the walker when you stand. The walker could easily tip backwards and will not offer you optimal support to stand.
- It is easiest to stand up from higher surfaces and surfaces with armrests (ie. chair and bedside commode). The armrests give you better leverage and control to stand up and sit down safely.
- The walker takes pressure off your back. While walking, push down through the walker with your arms as needed without raising your shoulders or leaning too far forward.
- Keep your feet near the back of the walker frame or rear legs. You don't want to be too close or too far away from the walker. Stay inside the walker.

- Stand up straight when walking. Keep your shoulders back, head up, chest up, and stomach muscles tight. If you receive a walker at the hospital, it will be adjusted to fit your height by the therapist. If you have a walker at home to use, adjust the walker height on each 4 legs to the proper height. Stand tall with your arms at your side. The handles should line up with your wrist.
- If you have wheels on your walker, there is no need to lift the walker - just push the walker forward as you walk.
- Your pace of walking is up to you. Think about increasing your pace and stride to what feels normal to you. Typically taking smaller steps and walking slower does not necessarily make it easier to walk. You may end up expending more energy than necessary.
- Each day, increase the frequency and distance you walk. Go at your own pace. Frequent walks are very important to help keep you moving and decrease your stiffness and pain.
- Begin with five minutes each hour and progress your walking from there.

TRANSFERS

Into a Chair

Back up to the chair until you feel it touch the back of your legs. With your hands, reach behind you to grasp the armrests of the chair. Using your arms and legs, begin to squat and lower yourself into the chair while keeping your back straight.

Special Instructions:

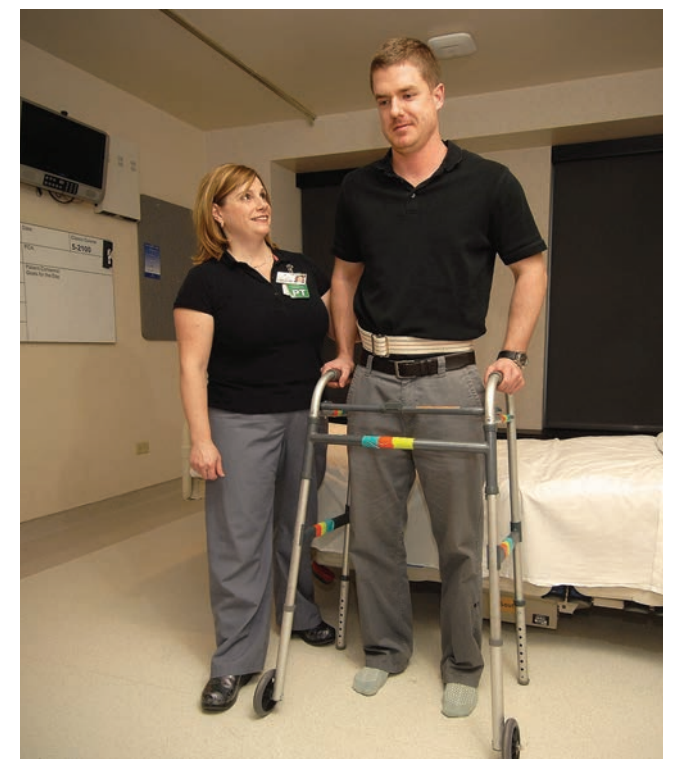
- Tighten your stomach muscles to provide support for the lower spine while maintaining a normal breathing pattern.
- Your feet should be firmly resting on the floor or a foot stool. Do not let your feet dangle as this will place additional stress on your spine.

Out of a Chair

Scoot forward until you are sitting near the edge of the chair. With your hands on the armrests push yourself up into the standing position. Straighten your legs and shift your weight forward over your feet. If you are using a walker, bring your hands to the walker as you are moving into the standing position.

Helpful Tips with Sitting:

- Protect your back by sitting in a chair with a back support. You can use a pillow or a towel as a lumbar roll.



Into the Car

Back up to the car seat until you feel it at the back of your legs. Reach a hand behind you for the back of the seat and the other hand to a secure spot on the dashboard. Do not grab the door as this is not a stable surface. Lower yourself slowly to sitting. Scoot your hips back until you are securely on the seat.

Leading with your hips, bring one foot into the car at a time until you are facing forward. Prevent twisting by keeping your shoulders, hips, and ears pointing in the same direction. You may want to recline the seat to increase the ease of lifting your legs. You can keep your seat slightly reclined while riding to support your back from the “bumps” in the road.

Out of the Car

When getting out of the car bring your legs out one at a time. Make sure to lead with your hips and shoulders and do not twist your back. Place one hand on the back of the seat and one hand on the dashboard. Push up to standing. If you are using an assistive device such as a walker, reach for the walker when you are stable.

Helpful tips with car transfers:

- Have an empty plastic bag on the seat to help you slide in/out.
- Have the seat positioned all the way back so you have maximum leg clearance.

Your doctor will determine when you can return to driving. You need to have full neurologic function and minimal pain or discomfort before driving. You will also need to discontinue taking medications that may affect your driving skills and safety.



Onto the Commode

Back up to the commode like you would to a chair. Without twisting to look, reach back for the handles of the commode or toilet seat and squat using your arms for balance to help slowly lower you down to a sitting position. Your feet should be flat on the floor for support while you are sitting.

Off of the Commode

Use your arms to push from the commode. Lift your body and scoot your hips forward to the edge of the seat. With your knees bent and your feet placed underneath you, push up through your legs and arms into a standing position. A toilet aid may be recommended to assist you with hygiene.



USING STAIRS

Negotiating consecutive steps:

- Use a handrail and/or a device for assistance.
- If you feel unsteady, take one step at a time. This will make negotiating steps easier and safer for you.
- Concentrate on what you are doing. Do not hurry.
- Have someone assist or spot you as you feel necessary or indicated by your therapist. This person should stand behind and slightly to the side of you when going up the steps. When going down the steps, the person should be in front of you.

Helpful Stair Tips

- Keep the steps clear of objects or loose items.
- Plan ahead. Right after surgery keep items in areas where you need them so that you can limit stair use.
- You can also install one or two handrails. Two handrails will increase the ease and safety with steps.
- Remember no pulling on the hand rails



Activities of Daily Living

USING A REACHER

Depending on your needs, you may need a reacher to avoid excessive bending. You can use a reacher to assist in lower extremity dressing. Sit down in a chair with your back supported. Use the reacher to hold the front of your underwear or pants. Bring the garment over one foot at a time pulling the underwear, then pants up to your thighs. Stand up, squat to reach your clothing and pull up both garments at the same time. Reverse the process to remove your clothing.

To Pick Up Items

A reacher can also be used to obtain those countless items that fall while you are under “no bending” restrictions. Use it as an arm extension to reach to the floor.

USING A SOCK AID

If you are unable to cross your legs while seated, you may use a sock aid to help you reach your feet without bending. Sit supported in a chair and hold the sock aid between your knees. Slide the sock onto the plastic cuff making sure to pull the toes of the sock all the way onto the sock aid. Hold the straps and drop the sock aid down to your foot. Place your foot into the cuff and pull up on the straps as you point your toes down. Pull the straps until the sock is all the way on. The sock aid should pull out from the heel of the sock. Let go of one strap and pull the cuff back onto your lap to put on the other sock.

Removing a Sock with the Reacher

Use the reacher to push your sock over the back of your heel. You can continue pushing the sock completely off your foot or use the jaw of the reacher to pull the sock completely off your foot. Other adaptive aids may also be used, such as a long-handled sponge, long shoe horn/shoe funnel.



BATHING

Stepping in/out of the tub

- If your shower is part of the tub, you should hold onto the front or back wall of the shower and step in or out sideways versus stepping in forward. This side-step places much less stress and motion on your lower spine.
- If you have a walk-in shower stall, step in as usual making sure not to twist as you turn to the controls.
- You are not allowed to take a tub bath or swim until your surgeon clears you to do so.



Caring for Yourself at Home

When you go home there are several things you need to know to ensure your safety, your steady recovery and your comfort.

CONTROL YOUR DISCOMFORT

1. Medication Management

- Gradually wean yourself from prescription medication to Tylenol®. You may take two extra-strength Tylenol® in place of your prescription medication up to four times per day.
- During the first three months after surgery (if you had spinal fusion), do not take over the counter anti-inflammatory medication such as aspirin, Motrin®, Advil®, Aleve®, Ibuprofen, Naproxen, etc. This type of medication can interfere with bone healing and thus jeopardize the success of your surgery. If you have prescription anti-inflammatory medication at home, consult your surgeon before taking these.

2. Use of Ice

- Use ice for pain control. Applying ice to your wound will decrease discomfort. Do not use ice for more than 20 minutes at a time each hour. Make sure there is a layer between your shirt and skin for example a towel or shirt.

3. Positioning

- Change your position frequently throughout the day. Get up and walk every 1-2 hours for 5-10 minutes.
- Sitting upright should be limited to between 15 – 30 minutes at a time, based on your surgeon's recommendation. This period can be prolonged if using a recliner and elevate your feet.
- Muscle strain and spasm can often be reduced by elevating the arms with pillows. If you had neck surgery, using this positioning technique along with pain medication will optimize your comfort.

4. Muscle Spasm

- If your surgeon has prescribed a muscle relaxer, take this as directed to help muscle spasms. Remember to avoid the B.L.T.'s + pickle!

5. Breathing

- Take slow, controlled, deep breaths. Cough deeply and use your incentive spirometer (I.S.) several times each day. This helps to expand your lungs after surgery and prevent pneumonia or respiratory complications. Deep breathing can also assist in relaxing your muscles and body. Breathing and relaxing while you move will help reduce muscle tension.

BODY CHANGES

- Your appetite may be poor. Drink plenty of fluids to prevent dehydration. Your desire for solid food will return.
- You may have difficulty sleeping at night. This is not abnormal. Don't sleep or nap too much during the day.
- Your energy level may be decreased for the first month.

CONSTIPATION

- Most patients experience constipation after surgery. This is caused by medications used in anesthesia, along with medications used following surgery to help manage pain. Poor appetite, decreased fluid intake, and decreased activity can also contribute to this problem. Laxatives are recommended for the treatment of constipation caused by opioid pain medications: stool softeners an/or fiber are not effective for this type of constipation. You should start a laxative following surgery to help manage constipation. If you have not had a bowel movement in 2-3 days, the laxative regimen should be intensified. You can also contact your surgeon's office or primary care provider for guidance. Remember to review your Discharge Instructions for suggestions on managing bowels after surgery.

CARING FOR YOUR INCISION

- Follow the surgeons' instructions of when you can shower. Do not shower if incision is draining or you have a drain in place.
- Notify your surgeon if there is increased drainage, redness, pain, odor or heat around the incision.

Signs of Infection

- Increased swelling, redness at incision site.
- Change in color, amount, odor of drainage.
- Increased pain around the incision.
- Fever greater than 101 degrees.

Prevention of Infection

- No soaking in tub, pool or hot tub.
- Avoid tub bath until cleared by your surgeon.
- Keep your wound clean and dry as much as possible to avoid potential infection until it fully heals.
- Change your shirt if you perspire, keep incision clean and dry.

DRESSING CHANGE PROCEDURE (MAY VARY DEPENDING ON YOUR SURGEON'S DIRECTIONS)

Dry Dressing

1. Wash hands.
2. Prepare all dressing change materials (open gauze pad and tape).
3. Remove old dressing.
4. Inspect incision for the following:
 - increased redness
 - increase in clear drainage
 - yellow/green drainage
 - odor
 - surrounding skin is hot to touch
5. Pick up gauze pad by one corner and lay over incision. Be careful not to touch the inside of the dressing that will lay over the incision.
6. Place the dressing over the incision and tape it in place.

Water -proof Sealed Dressing

If the incision has the water - proof sealed dressing, please follow these instructions:

- If dressing remains dry, remove occlusive dressing per discharge instructions. You may leave the incision open to air or redress as described above. Continue to inspect the incision daily as instructed above.
- If dressing becomes wet, remove promptly and follow the instructions at the top of the page. Change dressing daily and as needed until incision remains dry.
- Notify your surgeon of increased drainage.
- Gauze pads and Tegaderm® may be obtained from any medical supply pharmacy.

Dermabond

If the incision has been treated with Dermabond (skin glue), please follow these instructions:

- If wound begins to drain, follow the dressing change instructions for "gauze dressing." Change dressing daily and as needed until incision remains dry.
- If it continues to drain or you have questions concerning the drainage, call your surgeon's office.
- Do not use alcohol or vaseline on the incision as it dissolves the glue.

BLOOD CLOTS IN LEGS

During your recovery, bedrest and inactivity may cause the flow of blood to slow and clot in the veins of your legs. If a clot develops, you may need to be admitted to the hospital to receive intravenous blood thinners. Prompt treatment usually prevents the more serious complication of pulmonary embolus. Moving around throughout the day, especially walking, will help reduce the chance of a blood clot.

Prevention of Blood Clots

- Frequent foot and ankle pumps
- Walking
- Compression stockings
- Elevating your feet/legs when sitting

STOCKINGS

You may be asked to wear TED stockings while in the hospital. These stockings are used to help compress the veins and decrease the chance of blood clots. Once you are home you will wear the stockings during the day, taking them off at night and then reapplying them in the morning. Follow your surgeon's instructions on how long to wear the stockings.

Signs of Blood Clots in Legs

- Swelling in thigh, calf or ankle that does not go down with elevation of the legs
- Pain, tenderness in calf

These are warning signs. If they are present, promptly notify your surgeon.

Pulmonary Embolus

An unrecognized blood clot could break off in the vein and go to the lungs. This is an emergency and you should call 911 if suspected.

Signs of a Pulmonary Embolus

- Sudden chest or back pain worsened by deep inspiration
- Difficult and/or rapid breathing
- Shortness of breath
- Sweating
- Confusion

Prevention of Pulmonary Embolus

- Prevent blood clot in legs
- Recognize a blood clot in leg and call physician promptly.
- Avoid prolonged sitting with legs dependent

Post-operative Exercise Routine

A post-operative exercise routine is an important component of a successful spine surgery. The goals and guidelines for exercise are noted on the next few pages and will be reviewed with you by your physical therapist in the hospital.

- These exercises help to stabilize your spine and improve the strength and flexibility in your legs and thus optimize your surgical outcome and functional mobility.
- Whenever permitted by your surgeon, you may start more vigorous low-impact exercises such as using a recumbent bike or walking on a treadmill. Once your incision heals and your surgeon approves, you may

start water aerobics and swimming. These are good low-impact exercises for your entire body.

- Exercises are best done on a firm surface such as a firm bed. Protect your back. Keep good posture when exercising. Move slowly. Stop if you have excessive pain or discomfort. Do not lie on the floor.
- Listen to your body. If you notice increased discomfort or fatigue, recall what you did earlier that day or the day before. Chances are, you overdid things, and need to scale back until tolerated. Continue to slowly advance yourself as you tolerate the activity.

- Whenever you are performing an exercise, try to keep your abdominal muscles tight by "pulling your belly button in towards your spine." Make sure you are breathing continuously when performing the exercises. Try counting out loud to keep from holding your breath.

PRINCIPLES OF EXERCISES

When Standing

- Keep your head level with your chin slightly tucked in.
- Stand tall by looking forward and keeping your shoulders over your hips.
- Relax your shoulders.
- Tighten your stomach muscles by pulling in your stomach. This will relieve undo stress on your spine.

When Sitting

- Keep your head level and chin up.
- Place your buttocks all the way to the back of the chair. A folded towel in the small of the back provides lumbar support, if needed. Do not slouch.
- Keep your feet flat on the floor to support your back. When your feet dangle, it pulls at your lower back. If your feet don't firmly touch the ground, place your feet on a stool and put a pillow behind your back.

Limit to 15-30 minutes at a time.

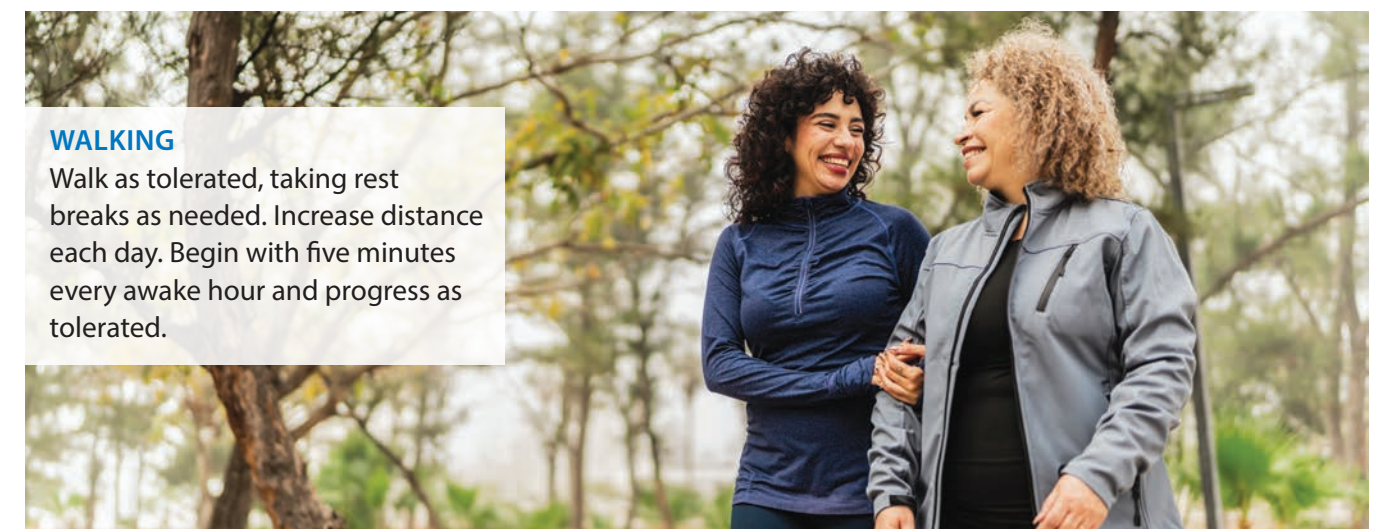
- Use your reclining chair at home.

When Lying

- Use a firm mattress.
- Lie on your side with your hips and knees slightly bent and with a pillow between your legs.
- Lie on your back with a pillow under your head and one under your knees to take the strain off your lower back.
- Avoid lying on your stomach.

When Walking

- Your goal is to advance the distance you walk each day.
- For the first few days at home, do multiple short walks throughout the day.
- This approach is better for reducing stiffness. As you can tolerate it, advance your walking distance. Frequency is better than pushing yourself to walk a certain distance.
- Keep your head up, chest up, shoulders back and relaxed, buttocks and stomach tucked in.
- Your therapist may recommend a walker or a cane. Use as instructed.



For All Exercises

Only perform those exercises approved by your surgeon

QUAD SET

Lie flat on back with legs straight. Tighten quadriceps muscles (muscles on front of thigh), pressing back of knee into mat, and hold as indicated. Repeat with other leg. Do not hold breath.

Sets: 1

Reps: 15–20

Hold: 10 seconds

Frequency: 2 times per day



GLUTEAL SETS (BOTTOM SQUEEZES)

Lying down, squeeze bottom together. Do not hold breath.

Sets: 1

Reps: 15–20

Hold: 10 seconds

Frequency: 2 times per day



ABDOMINAL SETS (TUMMY TUCKS)

Only if approved by your surgeon

Lie flat on back with knees bent. Tighten your stomach (abdominal) muscles by drawing your belly button towards your spine. You should feel your abdominal muscles tighten across the front. Hold that position and continue to breathe comfortably. If you can't breathe comfortably, then you are trying to tighten the muscles too much. As you practice this exercise, you will learn how to engage your abdominal muscles without affecting your ability to breathe.

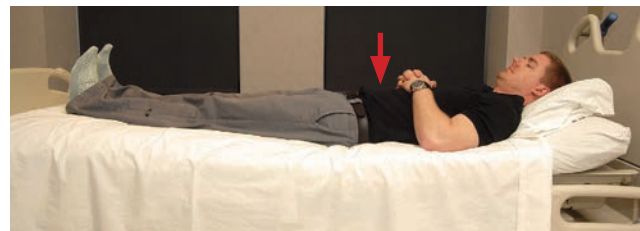
Sets: 1

Reps: 15–20

Hold: 10 seconds

Frequency: 2 times per day

NOTE: This exercise is just the beginning of a lifelong challenge of being able to keep your abdominal muscles tightened all day long. The strengthened muscles provide continuous support for your spine.



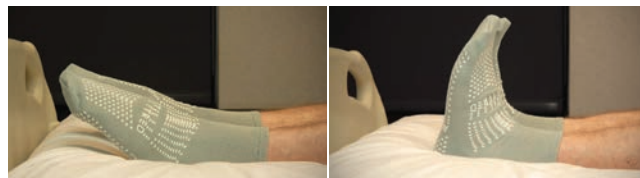
ANKLE PUMPS

Move ankles up and down as far as possible in each direction. To prevent back strain, perform this exercise while lying flat.

Sets: 1

Reps: 15–20

Frequency: One time per awake hour



Exercises are for Neck (cervical) Surgeries Only

SHOULDER CIRCLES

Raise and lower shoulders using a circular motion.

Sets: 1

Reps: 20

Frequency: 2 times per day



SCAPULAR RETRACTION- INITIAL PHASE

Pinch your shoulder blades together. Do not shrug your shoulders.

Sets: 1

Reps: 20

Hold: 10 seconds

Frequency: 2 times per day



HORIZONTAL SHOULDER STRETCH

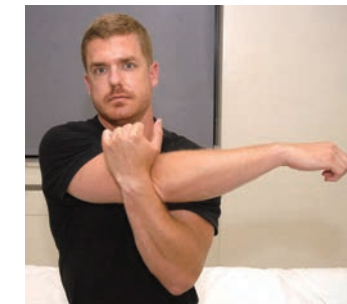
Place one arm across your chest with your opposite hand on the elbow, pull your arm across your chest. The stretch is felt in the back of the arm, shoulder, and neck.

Sets: 1

Reps: 20

Hold: 10 seconds

Frequency: 2 times per day



Do's and Don'ts for the Rest of Your Life

Whether or not you have reached all of the recommended goals in three months, all spine surgery patients need to participate in a regular exercise program to maintain their fitness and the strength of the muscles around their spine. With both your surgeon and primary-care physician's permission, you should be on a regular exercise program three to four times per week lasting 20-30 minutes. In general, the aim of spine surgery is to return the patient to an appropriate activity level, including activities of daily living.

- Avoid bending, lifting and twisting as much as possible. It may be possible to return to strenuous physical activity, including heavy lifting, but discuss this with your surgeon.
- Maintain ideal body weight.
- Do not smoke!

- Maintain proper posture.
- When traveling, change positions every one to two hours to keep your neck and back from tightening up.

WHAT TO DO FOR EXERCISE: CHOOSE A LOW-IMPACT ACTIVITY

- Enroll in recommended exercise classes.
- Follow a home program recommended by your surgeon.
- Take regular walks.
- Use home treadmill and/or stationary bike.
- Exercise regularly at a fitness center.
- Engage in low-impact sports, such as walking, swimming, gardening, dancing, etc.

Tips for A Healthy Back

These guidelines help protect your back after your post-operative restrictions have been eliminated.

HOW TO USE THIS SECTION: This section will give you some general tips on how to practice and adapt safe body mechanics to your everyday work activities. This is not an all-inclusive list, but should help you learn to apply and practice optimal body mechanics when performing activities.

NOTE: There is not only one correct way to do a task. It depends on your abilities. You may need to alter ways of moving based on your strength, flexibility, pain level, and/or other medical conditions.

STANDING

General Standing

- Do not lock your knees. A bent knee takes stress off your lower back.
- Wear shoes that support your feet. This helps to align your spine.
- If you must stand for long periods of time, raise one foot up slightly on a step or inside the frame of a cabinet. Resting a foot on a low shelf or stool can help reduce the pressure and constant forces placed on your spine. Shift feet often.
- While standing, keep shoulders back so that they do not roll forward.
- Keep back as upright as possible and keep your head and shoulders aligned with your hips.
- While ironing, keep ironing board waist level to avoid leaning forward at your back.

Showering

- When showering, try not to let your head bend forward or backwards. (ie: washing hair)
- To wash hair, use a tub bench and/or a hand-held shower spout. A long handled sponge will help wash your legs and feet without bending.

Grooming at the sink

- While brushing teeth or shaving, stand up straight. Do not lean or bend over the sink..
- To avoid bending forward, spit into a cup and use a cup for rinsing your mouth with water. You can also support your back by leaning one arm on the sink/counter as you spit into the sink. Bend at your knees, not your back.

Sweeping/Mopping

- Use the full length of the broom to sweep.
- Do not hold broom handle close to floor.
- Try to keep your spine as straight as possible.
- Sweep with the motion coming from your hips instead of your shoulders.
- Do not get down on your knees to scrub floors, instead use a mop.

SITTING

General Sitting

- Sit in chairs that support your back. Keep your ears in line with your hips. If needed, support your lumbar curve with a folded towel or lumbar roll.
- Your knees should be level with your hips. Your feet should be well supported on the floor to support your spine. If needed, place your feet up on a footrest.
- Do not slouch or let shoulders roll forward. This puts your back out of alignment and adds extra stress to your lumbar curve.
- Don't sit too far away from the steering wheel when you drive.
- Keep your shoulders back and head centered over hips.
- Do not let shoulders roll forward.

Computer Ergonomics

- Keep the computer screen at eye level.
- Have a lumbar support for your chair.
- Armrests need to be placed at a level that supports the forearms and keeps them at waist level. Forearms should not be pushing up into your shoulders.
- Adjust the height of the chair so that the keyboard is at waist level to support forearms.
- Maintain a good upright sitting posture.
- Take frequent standing/rest breaks while working (every 20-30 minutes).

OTHER ACTIVITIES

Bending

- Bend at your knees and hips instead of at your waist/back. Keep your chest and shoulders upright, centered over hips. This maintains your three natural spinal curves, and keeps stress off your back.
- Hold objects close to your body to limit strain on your back.
- Do not bend over with legs straight. This motion puts great pressure on your lower back and can cause serious injury.

KITCHEN

- Plan ahead! Gather all your cooking supplies at one time. Then, sit to prepare your meal. This cuts down on excessive trips to the refrigerator, cabinets, etc.
- Place cooking supplies and utensils in a convenient position so they can be obtained without too much bending or stretching.
- Raise up your chair by putting cushions on the seat or using a high stool when working.

Refrigerator

- Bend at knees and hips to get things out of the lower portion of the refrigerator. It is better to squat or kneel instead of bending.
- Organize your refrigerator so that frequently used items are easily accessible.

Dishwasher

- To get objects out of the dishwasher, squat or kneel down next to or by the lower rack..
- Try sitting on a swiveling office chair to unload the dishwasher. You can place the items up onto the counter by pivoting around with your feet. Then stand and put items into the cabinets.

WIPING SURFACES

- When wiping or dusting low objects, do not bend the lower back.
- Try to kneel or squat next to object.
- Use dusting implements that reach distances so you don't have to reach far or lean your head backwards.
- To clean overhead or tall objects, use a step stool so that you don't have to over-reach.
- Do not overextend yourself when cleaning low places such as bathtubs.
- Try to move lower by squatting and brace yourself with a fixed object.
- Do not get down on your knees to scrub bathtub. Use mop or other long-handled brushes.
- Always use non-slip adhesive or rubber mats in tub or "aqua/water shoes."

MAKING BED

- Do not bend over too far when making a bed.
- Try to move sheet to corners and kneel or squat to pull them around mattress.

SEXUAL RELATIONS

- It is best to avoid sexual relations until advised by your surgeon. Stop immediately if you have an increase in surgical pain.
- Once you resume sexual relations, it is important that you continue to observe the lifting and bending restrictions.
- Lying on your side or back are the safest positions.

YARD WORK

- When digging, place blade end into soil with handle straight up and down.
- Step on top of blade then step off and angle shovel upward.



PLANTING

- When weeding or planting, do not bend over from a standing position.
- Kneel or squat in the area you are working. It is recommended that you maintain a squat position for only a short period of time since this places stress on the knees.
- You can also sit on a chair or stool to reduce stress on your knees instead of kneeling or build higher planting beds.

MOWING

- When pushing or pulling a mower, do not bend forward.
- Keep your back straight. Bend at your knees and hips. Push whenever possible.

SHOVELING

- Grab shovel close to end.
- Shovel by a lunge forward and shifting weight.
- Use your legs, not your back.

RAKING

- When raking, keep back straight by bending at the hip.
- Rake close to body using arms and shifting legs to perform rake motion.
- Take frequent breaks.

LIFTING

General Lifting

- Squat to pick up a heavy object and let your leg and butt muscles do the work. Hold heavy objects close to your body to keep your back aligned. Lift objects only to chest height.
- Lift your body and the load at the same time. Let your legs do most of the lifting.
- Do not bend over at the waist or twist while lifting.

Laundry

- Place basket on top of washer or dryer instead of bending down with your back.
- Squat or sit to load/unload a front-loading washer and/or dryer
- To unload small items, use a reacher.
- Do not bend at the waist to reach when loading/unloading.
- Pick up laundry basket by squatting near it. Do not bend over to lift.

Carrying Luggage

- Carry bags on both sides of body instead of on one side. Try to keep weight equal on both sides.
- Use rolling suitcase.
- Do not place items in the overhead bins.

Lifting Object from Floor

- Stand with box between feet, grasping both handles while squatting. Keeping back straight, extend knees and lift box.
- Return to original position in same manner.

Childcare

- Do not bend over at your back to pick up a child. Instead, squat down, bring child close to chest and lift with legs.
- When placing infant or child in car seat, always support yourself. Place knee on the seat of the car to unload the stress placed on your back.
- Never bend over at the waist.
- To maintain good posture and decrease stress on back, hold the baby/child to the center of your body, not propped on a hip.
- Keep the baby close to body by cradling in your arms.
- Keep the head as upright as possible.



Unload Car Trunk

- Place leg on bumper and bring objects close to you.
- Bend at your hips and lift object out of trunk.
- Keep abdominal muscles tight during the entire process.



TURNING

General Turning

- Think of your upper body as one straight unit, from your shoulders to your buttocks.
- Turn with your feet, not your back or knees. Point your feet in the direction you want to go. Then step around and turn.

Avoid Twisting

- Avoid twisting trunk to reach things.
- Step in the direction of the object you are trying to reach.



REACHING

General Reaching

- Store common items between shoulder and hip level.
- Get close to the item. Use a stool or a reacher if you need to.
- Tighten your abdominal muscles to support your back. Use the muscles in your arms and legs (not your back) to lift the item.

Reaching a Lower Shelf

- When placing an object on a low shelf, always bend down on one knee.
- Use other leg to support.
- Never bend over from waist to place item on shelf.

Overhead Cabinets

- Do not over-reach to high positions.
- Step up on a stable stool so that overhead objects are lower.

Vacuuming

- Use your legs, not your back, when vacuuming.
- Do not vacuum by reaching out away from body.
- Try to work for small intervals of time with frequent breaks.
- Keep the vacuum close to body.
- Use a lightweight vacuum. Push whenever possible.

SLEEPING

- Sleep on your side or back. If you sleep on your side, bend your knees to take some pressure off your back, put a pillow between your knees to keep your curves aligned.
- Do not sleep on a soft bed or couch. This takes your three spinal curves out of alignment and adds extra stress to your back. Avoid sleeping on your stomach, which can strain your neck and back.

GENERAL SAFETY

- Remove throw rugs. Cover slippery surfaces with carpets that are firmly anchored to the floor with no edges to trip over.
- Be aware of all floor hazards such as pets, small objects or uneven surfaces.
- Provide good lighting throughout. Leave a light on at night in the bathroom.
- Keep extension cords and telephone cords out of pathways.
- Avoid slippers without covered toes or shoes without backs. They tend to cause slips and falls.
- Sit in chairs with arms. It makes it easier to get up.
- Rise slowly from either a sitting or lying position so as not to get light-headed.
- No heavy lifting until your surgeon gives you permission
- Stop and think and always use good judgment.

Cervical Laminectomy/Discectomy - Frequently Asked Questions

Q. What is wrong with my neck?

A. You have a “pinched nerve.” This can be produced by a ruptured disc or by bone spurs. Discs are rubbery shock absorbers between the vertebrae, and are close to the nerves which travel down to the arms. If the disc is damaged, part of it may bulge or even burst free into the spinal canal, putting pressure on the nerve, causing arm pain, numbness, or weakness. Bone spurs, usually the result of arthritis, can also put pressure on nerves. Occasionally, pressure from bone spurs or a ruptured disc may affect the spinal cord and cause abnormalities in the upper extremities.

Q. What is required to fix the problem?

A. In most cases, a small (three-four inch) incision is made in the posterior part of the neck. Muscles supporting the spine are pushed aside temporarily, and a small “window” is made into the spinal canal. The spinal nerve is protected, and the ruptured part of the disc or the bone spur is removed. If bone spurs and arthritis are the cause of your problem, you may require a bigger incision and more bone may have to be removed.

Q. When is this operation necessary?

A. In almost all cases, the major reason for spine surgery is pain which is intolerable to the patient and can not be relieved using non-surgical measures. If pain persists at an unacceptable level, if you cannot function because of pain, or if weakness or other neurologic problems develop, then surgery may be necessary to relieve the problem.

Q. How long will I be in the hospital?

A. Most patients will be discharged the same day of surgery. Some patients may need to stay overnight.

Q. What can I do after surgery?

A. You should try to get up and move around as much as you feel able. While in the hospital, you must call for assistance when getting out of bed, getting up from the chair, or going to or from the bathroom. Please use the call light and wait for help prior to getting up.

Q. What shouldn't I do after surgery?

A. For at least 6 weeks, you should avoid lifting more than 5–10 pounds, overhead lifting, frequent or

repetitive neck movements and vigorous sports until instructed otherwise by your surgeon.

Q. When can I go back to work?

A. That depends on what kind of work you do and how far you have to drive. It can be as little as two weeks, but may be longer if your job involves manual labor or if you have to drive more than 30 minutes to get there.

Q. What are my chances of being relieved of my pain?

A. 90-95 percent of patients get relief from their nerve symptoms or arm pain. Neck and shoulder pain are less predictably relieved by disc surgery. Up to 15 percent of patients may have some neck and shoulder aching after surgery; this percentage may be higher in patients who have a substantial amount of neck and shoulder pain before surgery. Other conditions may also produce continued pain even after successful disc surgery.

Q. Will my neck be normal after surgery?

A. No. Even if you have excellent relief of pain, the disc has still been damaged. However, most people can resume almost all of their normal activities after disc surgery. People who do heavy work generally take longer to recover and may not be able to do everything they could do before their injury.

Q. What other risks are there?

A. There are general risks with any type of surgery. These include, but are not limited to, the possibility of wound infection, uncontrollable bleeding, collection of blood clots in the wound or in the veins of the leg, pulmonary embolism (movement of a blood clot to the lung), heart attack, stroke and death. The chances of any of these events happening, particularly to a generally healthy patient, are low. Rarely, death may occur during or after any surgical procedure.

Q. Is my entire disc removed?

A. No, only the ruptured part and any other obviously abnormal disc material is removed. This generally amounts to no more than 10-15 percent of the whole disc.

Q. Could this ever happen to me again?

A. Unfortunately, yes. As mentioned above, only part of the disc is removed and there is no way of making the remaining disc normal again, which means recurrent herniations do occasionally occur. Also, adjacent discs may become abnormal too, and could rupture in the future.

Q. Should I avoid physical activity?

A. No. Exercise is good for you. You should get some sort of exercise at least several times a day. Start with walking, 10–15 minutes per walk. Your activity depends upon your surgeon's protocol.

Cervical Fusion/ Disc Replacement - Frequently Asked Questions

Q. What is a cervical disc replacement?

A. A cervical disc replacement is a surgical procedure that involves removing a damaged or degenerated cervical disc and replacing it with an artificial disc device.

Q. What is wrong with my neck?

A. You have one or more damaged discs in your neck. Discs are rubbery shock absorbers between the vertebrae, and are close to the nerves which travel out to the arms. If the disc is damaged, part of it may bulge or even burst free into the spinal canal, putting pressure on the nerves and causing arm pain, numbness, weakness and/or pain in the neck or shoulder area. Occasionally, this pressure may affect the spinal cord and cause abnormalities in the extremities. Bone spurs, usually the result of arthritis, can also put pressure on nerves or the spinal cord. Loss of the normal "shock absorber" function, or arthritis around the damaged disc, can also produce mechanical pain around the neck or shoulders with neck movement or awkward positions.

Q. What is required to fix the problem?

A. The best approach to your condition is to remove the damaged disc and bone spurs from the front, or anterior part, of the neck. An arthroplasty or fusion may be required. Certain conditions, however, require the surgeon to perform the fusion using a posterior approach instead.

Q. What is spinal fusion?

A. A fusion is a bony bridge between at least two other bones, in this case two vertebrae in your spine. The vertebrae are the blocks of bone which make up the bony part of the spine, much like a child's building blocks stacked on top of each other to make a tower. Normally each vertebrae moves within certain limits in relationship to its neighbors. In spinal disease, the

movement may become excessive and painful, or the vertebrae may become unstable and misaligned, putting pressure on the spinal nerves. In cases like this, surgeons try to build bony bridges between the vertebrae using pieces of bone, which we call bone graft. The bone graft may be obtained either from the patient himself, usually from the pelvis, synthetic bone product, or from a bone bank. There are advantages and disadvantages to either source. The bone graft is laid between the vertebrae. The bone graft has to heal and unite to the adjacent bones before the fusion becomes solid. Spine surgeons often use plates to protect the bone graft and stabilize the spine during the healing period, attaching them to the spine using screws.

Q. How is the operation performed?

A. An incision, usually about two inches in length, is made across the front of the neck. The windpipe, esophagus (food pipe) and other tissues are temporarily pushed aside and the abnormal disc or discs are removed completely. If your own bone is to be used for the fusion, another small incision is made over the front of the pelvis and one or more small bone grafts are removed to replace the disc or discs. In most cases this bone will heal or "fuse" to the vertebrae above and below it within six to nine months, creating a solid bony bridge between the two vertebrae and eliminating movement between them. For fusions involving more than one level, or in the case of unusual spinal instability, internal plates and screws may be used to improve stability and conditions for bone healing.

Q. When is this operation necessary?

A. In most cases, the major indication for spine surgery is pain. Weakness, numbness, clumsiness and instability with arm function may also be an indication for surgery. Often, non-surgical measures can control the pain

satisfactorily. If the pain persists and interferes with daily activities or if other neurologic problems develop, then surgery may be necessary to relieve the problem. In most cases, the patient makes the final decision about surgery because of pain. If neurologic damage is occurring, your doctors may strongly recommend that you proceed with the operation.

Q. How long will I be in the hospital?

A. Some patients will be discharged the same day of surgery; other patients may need to stay overnight. However, posterior cervical fusion patients may be in the hospital for one - two days.

Q. What can I do after surgery?

A. You should try to walk and take care of yourself as much as you are able. While in the hospital, you must call for assistance when getting out of bed, getting up from the chair, or going to or from the bathroom. Please use the call light and wait for help prior to getting up. You should try to exercise each day. You may perform other low-impact activities not requiring lifting or neck movement as allowed by your collar. If a collar is not required, you may drive when allowed by your surgeon and you are no longer taking narcotic pain medication.

Q. What shouldn't I do after surgery?

A. You should avoid lifting heavy objects (more than 5 lbs. or anything more than your plate of food or a book), and avoid all overhead lifting. Twisting, repetitive bending and tilting your head back to look overhead are also stressful to the neck. If you are a smoker, you definitely should not smoke until your fusion is completely solid. Smoking interferes with bone healing.

Q. Will I need to wear a neck collar?

A. You may or may not need to wear a collar after your surgery. This will be determined by your surgeon. If your surgeon determines that a collar is necessary, the type of collar and length of time you need to wear the collar will be determined by your surgeon as well.

Q. When can I go back to work?

A. That depends on the type of work you do. For sedentary jobs, work may resume when you feel comfortable and can get to work. For jobs which require more strenuous physical exertion, a longer healing time may be required. Your surgeon will discuss this with you individually.

Q. What are the chances of being relieved of the pain?

A. 80-95 percent of the patients obtain relief from their arm pain. Relief of neck pain is less predictable, usually in the range of 65-75 percent.

Q. Will my neck be normal after surgery?

A. No. While most patients have excellent relief of arm pain after surgery, your neck will not be completely normal. While most patients with a one or two-level fusion will not notice significant loss of motion, the stiffened segment of your spine does put additional stresses on adjacent discs, which may already be abnormal to some extent. These other discs may cause symptoms. Although most patients can resume most of their normal activities after healing, you should take care of your neck. Your surgeon can discuss this with you in detail.

Q. What other risks are there?

A. There are general risks with any type of surgery. These include, but are not limited to, the possibility of wound infection, uncontrollable bleeding, collection of blood clots in the wound or in the veins of the leg, pulmonary embolism (movement of a blood clot to the lung), or heart attack. The chances of any of these events happening, particularly to a generally healthy patient, are low. Rarely, death may occur during or after any surgical procedure.

Q. Could I have difficulty swallowing?

A. Most patients report mild discomfort with swallowing for a few days after surgery. Occasionally, swallowing difficulties may be more significant and last for several weeks. If swallowing difficulty persists, notify your surgeon. It may be helpful to have the problem assessed by a swallowing expert who could offer recommendations.

Q. Will my voice be affected?

A. Some patients may be hoarse after anterior cervical spine surgery. Usually this goes away within a few days or weeks. Contact your surgeon if hoarseness persists.

Q. Is the entire disc removed?

A. Yes.

Q. Could this happen to me again?

A. Unfortunately, yes. Similar conditions which led to the disc damage being treated now may have already started in one or more of the other discs, in your neck. A small percentage of fusions do not heal normally, which may require additional surgery. The chance of this happening increases if the fusion is attempted at more than one level, which is why spine plates are sometimes used for multi-level fusions. Over 90 percent of patients do well. Less than 10 percent have some recurring problems.

Lumbar Laminectomy/ Discectomy - Frequently Asked Questions

Q. What is wrong with my back?

A. You have a “pinched nerve.” This can be produced by one or more herniated discs and/or areas of arthritis in your back. The discs are rubbery shock absorbers between the vertebrae, and are close to nerves that originate in the spine and then travel down to the legs. If the disc is damaged, part of it may bulge (herniate) or even burst free into the spinal canal, putting pressure on the nerve and causing leg pain, numbness or weakness. Bone spurs associated with arthritis may also cause the same type of symptoms.

Q. What is required to fix the problem?

A. The discs or bone spurs pressing on your nerve must be removed. This is done by making an incision (usually two or three inches long) in the middle of your lower back, moving the muscles covering your spine to the side, and making a small window into your spinal canal. The nerve is exposed, moved aside and protected; and the protruding disc or bone spur is then removed. This decompresses the nerve and, in most cases, leads to rapid improvement in nerve pain, numbness and weakness. Sometimes the abnormality may be more extensive, extending over several disc segments, requiring a longer incision for decompression.

Q. Who is a candidate for lumbar laminectomy and when is it necessary?

A. The primary reason for this operation is pain that is intolerable to the patient. Sometimes increasing nerve dysfunction (particularly weakness) or loss of bowel or bladder control may make the surgery necessary even if pain is not severe. In most cases, nerve dysfunction is

Q. Should I avoid physical activity?

A. No. Exercise is good for you. You should get some sort of exercise several times a day. Start with walking, 10-15 minutes per walk. Your activity depends upon your surgeon’s protocol.

not severe and pain can be controlled by non-surgical means. If this doesn’t happen, and if the pain and subsequent disability become intolerable, surgery is a reliable way to solve the problem. Since the patient is the one feeling the pain, the patient is usually the one who decides when he or she is ready for surgery.

Q. Is my entire disc removed?

A. No, only the ruptured part and any other abnormal disc material are removed. This generally amounts to no more than 10-15 percent of the entire disc.

Q. How long will I be in the hospital?

A. Laminectomy patients are usually out of bed within an hour or two after their operation, and some can go home on the day of surgery. If you have an overnight stay, you will routinely go home the next day.

Q. What can I do after surgery?

A. You may get up and move around as soon as you feel like it. While in the hospital, you must call for assistance when getting out of bed, getting up from the chair, or going to or from the bathroom. Please use the call light and wait for help prior to getting up. Take your time when changing position—wait a moment before standing. If you wear glasses, make sure you are wearing them. Also, make sure you are wearing non-skid slippers or shoes when walking. Once it has been approved by your surgeon and you are no longer taking narcotic pain medication, you may drive short distances if you feel able. **You should avoid bending, lifting and twisting** (we call these the “B.L.T.’s”) for six weeks to allow for healing of the surgical area.

Q. When can I go back to work?

A. That depends on the kind of work you do, and how long you have to drive to get there. Surgical patients can typically return to sedentary (desk) jobs that they can reach with a drive of 15 minutes or less whenever they feel comfortable and have been approved by their surgeon, (usually two or three weeks). You should not drive long distances (30 minutes or more) for about one month after surgery. If your job requires physical labor, you should consult your surgeon.

Q. What is the likelihood that I will be relieved of my pain?

A. 90-95 percent of patients get relief of their leg pain. Some patients (about 15 percent) will continue to have noticeable back pain in some situations, and may require additional treatment.

Q. What other risks are there?

A. There are general risks with any type of surgery. These include, but are not limited to, the possibility of wound infection, uncontrollable bleeding, collection of blood clots in the wound or in the veins of the leg, abdominal problems, pulmonary embolism (a blood clot to the lungs) or heart attack. The chances of any of these happening, particularly to a healthy patient, are low. Rarely, death may occur during or after any surgical procedure.

Q. Will my back be normal after surgery?

A. Though you may have excellent relief of pain, a disc is never completely normal after it has herniated, and if your problem has been caused by arthritis, the arthritis cannot be cured even if the bone spurs have been removed and the nerves decompressed. You may have more back pain than a normal person would have, and there is an increased risk of re-herniation of the damaged disc. However, most people can resume almost all of their normal activities after recovering from surgery.

Q. What should I do after surgery?

A. You should resume low-impact activities as soon as possible, starting with walking. Try to walk a little farther each day. Your activity depends upon your surgeon’s protocol. Usually you will have limited activity the first few weeks but walks 2–3 times per day for 10–15 minutes are encouraged.

Q. What shouldn’t I do after surgery?

A. In general, you should limit heavy lifting, bending, twisting and high impact physical activities, including contact sports. Consult your surgeon for details.

Q. Could this ever happen to me again?

A. Unfortunately, yes. As mentioned above, only part of the disc is removed and there is no way to return the disc to normal again, which means recurrent herniations do occasionally occur. Also, adjacent discs may be abnormal, too, and could rupture in the future.

Q. Should I avoid physical activity?

A. No. Exercise is good for you! Each surgeon’s protocol is different. Vigorous activity should be avoided until advised by your surgeon. Check with your surgeon to see if walking on a treadmill or using an exercise bike is appropriate. Swimming is not allowed until approved by your surgeon



Lumbar Fusion - Frequently Asked Questions

Q. What is wrong with my back?

A. You have one or more damaged discs and/or areas of arthritis in your back. This produces pain, and may produce abnormal motion, or misalignment of your spine. Discs are rubbery shock absorbers between the vertebrae, and are close to nerves that travel down to the legs. If the disc is damaged, part of it may bulge or even burst free (herniate) into the spinal canal, putting pressure on the nerve and causing leg pain, numbness or weakness.

Q. What is required to fix the problem?

A. Your condition requires both a nerve decompression (freeing the nerves from pressure) and a spinal fusion.

Q. What is spinal fusion?

A. A fusion is a bony bridge between at least two other bones; in this case, two vertebrae in your spine. The vertebrae are the blocks of bone that make up the bony part of the spine, like a child's building blocks stacked on top of each other to make a tower. Normally each vertebra moves within certain limits in relationship to its neighbors. In spinal disease, the movement may become excessive and painful, or the vertebrae may become unstable and move out of alignment, putting pressure on the spinal nerves. In cases like this, surgeons try to build bony bridges between the vertebrae using pieces of bone called bone graft. The bone graft may be obtained from the patient, (usually from the pelvis), synthetic bone product, or from a bone bank. The bone graft is either laid next to the vertebrae or actually placed between the vertebral bodies (the rubbery disc that normally lies between the vertebrae must be removed). In either case, the bone graft has to heal and fuse to the adjacent bones before the fusion becomes solid. Spine surgeons often use screws and rods to protect the bone graft and stabilize the spine while the fusion heals.

Q. How is the operation performed?

A. An incision is made in the middle of the lower back; or two smaller parallel incisions. The length of the incision varies depending upon number of vertebrae involved. Muscles supporting the spine are pushed aside temporarily. The spinal nerve is exposed, moved

aside and protected, and the ruptured disc or bone spur is removed to loosen the nerve. The fusion is performed as described previously. The wound is then closed and dressings are applied. The length of this operation varies depending on the complexity of the condition. Sometimes the spinal fusion is performed with an anterior approach. In this case, a vascular surgeon would make an incision in the lower abdomen, gently move the internal organs aside, and proceed with the surgery as described above. The length of the incision varies depending upon number of vertebrae involved.

Q. Will my only incision be on my back?

A. Your surgeon will discuss where the incisions will be to perform the surgery. Sometimes, an abdominal (anterior) or side (lateral or oblique) incision may be done as part of the fusion surgery. The incision would be on your abdomen, flank or surrounding the rib cage. This may require the assistance of a vascular surgeon, which you will have a consult with prior to surgery.

Q. Who is a candidate for lumbar fusion, and when is it necessary?

A. When the back and nerve problems cannot be corrected in a more simple procedure and the pain persists at an unacceptable level, it is necessary to do a fusion. Some of the conditions which require spinal fusion are discussed in the answer to "What is Spinal Fusion?"

Q. Are there other risks involved?

A. There are general risks with any type of surgery. These include, but are not limited to, the possibility of wound infection, uncontrollable bleeding, collection of blood clots in the wound or in the veins of the leg, abdominal problems, pulmonary embolism (a blood clot to the lungs), pneumonia, weakness in extremities, loss of flexibility, or heart attack. The chances of any of these happening, particularly to a healthy patient, are low. Rarely, death may occur during or after any surgical procedure.

Q. What are my chances of being relieved of my pain?

A. More than 90 percent of patients get relief of their nerve symptoms or leg pain. Relief of back pain is less predictable, occurring about 75 percent of the time.

Q. Will my back be normal after surgery?

A. No. Even if you have excellent relief of pain, the spine is not completely normal after a fusion. Stiffening one segment of the spine with the fusion may put additional strain on other areas. Other discs may have started to wear out. Even if they aren't causing you pain now, they may do so in the future. For these reasons, you may have more back pain than a normal person would have. However, most people can resume almost all of their normal activities after their fusion has healed.

Q. How long will I be in the hospital?

A. The hospital stay is generally one to three days, depending on when discharge criteria has been met.

Q. What shouldn't I do after surgery?

A. Generally, you should **avoid bending, lifting, pulling and twisting** (we call these the "B.L.T.'s") for six to nine months. Even if screws or rods are used, six to 12 months are required for the fusion to heal completely. You must protect your spine during this time. Your surgeon may prescribe a brace for you to wear for part of this time. If you are a smoker, you definitely should not smoke until your fusion is completely solid, since smoking interferes with bone healing.

Q. What can I do after surgery?

A. You should get up and move around frequently as soon as you feel able and your therapist or nurse approve. While you are in the hospital, it is important

that you call for assistance before getting out of bed. If you are feeling well enough, your surgeon has approved it, and you are no longer taking narcotic pain medication you may begin driving in two to three weeks. If your surgeon has prescribed a back brace, it is important to wear that while you are driving.

Q. When can I return to work?

A. This should be discussed individually with your surgeon. Generally, patients may return to sedentary jobs whenever they are comfortable, which is usually within three to six weeks. If you drive more than 30 minutes to get to work, your surgeon may want you to wait longer. It takes much longer to return to work that requires strenuous physical activity. The final decision regarding when you are ready to return to work lies with your surgeon.

Q. Could this happen to me again?

A. Unfortunately, yes. A fusion may add stress to the levels above and below the fusion. If the fusion doesn't heal solidly, even with plates and screws, your symptoms may recur and additional surgery may be needed.

Q. Should I avoid physical activity?

A. No. Exercise is good for you! Each surgeon's protocol is different. Vigorous activity should be avoided until advised by your surgeon. Check with your surgeon to see if walking on a treadmill or using an exercise bike is appropriate. Swimming is not allowed until approved by your surgeon.

SI-Sacroiliac Fusion - Frequently Asked Questions

Q. What is Sacroiliac (SI) fusion?

A. Sacroiliac fusion is a minimally invasive surgery through a small incision on the side. The surgeon places titanium (metal) implants and bone graft material to stabilize the joint and promote bone growth. Sometimes an OPEN SI fusion is performed in conjunction with a lumbar spinal fusion to add stability to the bottom levels of the spine.

Q. What causes Sacroiliac (SI) joint pain?

A. The SI joint can become painful when the ligaments that support the SI joint become too loose or too tight. SI joint pain can occur when movement in the pelvis is

not the same on both sides. This can occur as the result of a fall, work injury, car accident, pregnancy and childbirth, hip or spine surgery, or some autoimmune diseases.

Q. What can I do after surgery?

A. You may be restricted to using a walker or crutches in order to put only the recommended amount of weight on your operative side. You should avoid squatting. Several small walks are preferable to a single longer walk, and you may progress to walking short distances outdoors on even surfaces. Sleep on the non-operative side with a pillow between your knees, if possible.

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