

SPINE SURGERY PATIENT GUIDE



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HERMANN | 
Orthopedic Hospital

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Spine Surgery Patient Guide

Welcome

Congratulations on your decision to have spine surgery! You are probably excited about the prospect of taking this important next step toward a new life.

Specialists affiliated with the Memorial Hermann | Rockets Orthopedic Hospital Spine Program have carefully planned every step of your care to help ensure a speedy and successful journey to recovery. Rest assured – you are in excellent hands every step of the way.

The Memorial Hermann | Rockets Orthopedic Hospital Spine Program uses a team approach to caring for you and your family. Physicians affiliated with the Spine Program include some of the most experienced and highly trained orthopedic spine surgeons in the Houston area. Each team member is specially trained to take care of patients having spine surgery. Even though they have cared for countless patients, they also understand that your needs are unique.

The goal of the Spine Program is to provide the highest quality and innovative, individualized care for you and your family. The affiliated surgeons along with nurses, therapists and support staff complete a team designed to assist you through your journey to spine wellness.

Thank you for choosing the Memorial Hermann | Rockets Orthopedic Hospital Spine Program.

Spine Surgery: Important Dates

Date of my surgery	_____
Date of Pre-Admission Testing	_____
Preoperative Education Class	_____
Time to arrive on the day of my surgery	_____
Follow-up appointment with my surgeon	_____

About This Guide

This Spine Surgery Patient Guide will help prepare you for your surgery and recovery.

It is designed to educate you so that you will know:

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

Remember: This is just a guide. **Your physician, nurse or therapist may add to or change the**

recommendations to personalize your treatment process. Always use their recommendations first and be sure to ask questions if any information or instructions are unclear. Keep this Spine Surgery Patient Guide as a handy reference for at least the first year after your surgery.

If you have any questions on subjects that are not covered, please ask your physician, therapist or the Memorial Hermann | Rockets Orthopedic Hospital Spine Nurse Navigator for further information.

Introducing Your Memorial Hermann | Rockets Orthopedic Hospital Care Team

The Memorial Hermann | Rockets Orthopedic Hospital Spine Program has an experienced and skilled team that will focus specifically on you. Each team member is specially trained to help ensure a safe and successful recovery. They work together with you and your coach to ensure the best experience. Your spine team may include:

Spine Surgeon: Your spine surgeon is the hospital-affiliated physician who will perform your spine surgery and will oversee your care throughout your stay at the hospital.

Spine Nurse Navigator: Your navigator is a registered nurse who will serve as your coordinator of care and will follow you throughout your stay in the hospital. The navigator will also help you prepare for your transition back to your home. He or she will work directly with your spine surgeon and the rest of the team to ensure you and your family have the best possible experience and outcome.

Coach: Your coach is a person that you designate to support you as you prepare for and recover from your spine surgery. This can be a spouse, friend or family member who will provide you with support and encouragement throughout your experience.

Anesthesia Provider: Your anesthesiologist is a hospital-affiliated physician responsible for administering the anesthesia throughout your surgery. He or she may also help manage your postoperative pain.

Primary Care Physician: Your primary care physician is your family physician and the physician who manages your overall health. You can expect your primary care physician to stay in contact with your spine surgeon, and be informed regarding your progress after your dismissal from the hospital.

Cardiologist: If you have a history of cardiac disease, your cardiologist is an integral member of the team as we plan your spine surgery. Your cardiologist may provide surgical clearance as well as assist in managing your cardiac medications during the planning of your surgery and throughout your hospitalization and recovery.

Hospitalist: Hospitalists are generalists who only take care of patients when they are in the hospital. Hospitalists work in close consultation with the patient's attending physician and specialists to coordinate care for patients.

Physician Assistants (PA): Physician Assistants are advanced practice practitioners that are licensed to initiate some aspects of medical care, including prescribing certain drugs under the supervision of one or more supervising physicians.

Registered Nurse: A registered nurse is a professional that has received a degree in nursing and met the Texas Board of Nurse Examiners' requirements to hold a license as a registered nurse. Registered nurses provide direct patient care to you along with other licensed and unlicensed personnel such as licensed vocational nurses and patient care assistants (unlicensed personnel).

Case Managers: Case Managers are professionals typically licensed as registered nurses that will work with you to plan and facilitate options to meet your healthcare needs in a cost-effective manner. They will also work with your insurance company to authorize hospitalization and help you with discharge planning and home care needs.

Patient Care Assistant: Patient Care Assistants are unlicensed nursing personnel that assist you with activities of daily living and provide direct patient care to you under the supervision of a registered nurse.

Physical Therapist: Physical Therapists are licensed professionals that provide physical therapy services. Physical therapists perform and interpret tests, and develop therapy programs focused on improving posture, movement, strength, endurance, cardiopulmonary function, coordination, joint mobility, flexibility, and functional abilities in daily living skills.

Occupational Therapist: Occupational Therapists are licensed professionals that address physical, cognitive, psychosocial, sensory and other aspects of performance to support engagement in everyday life activities that affect health, wellbeing, and quality of life. They work with patients and other healthcare providers to develop or restore all the components of daily performance.

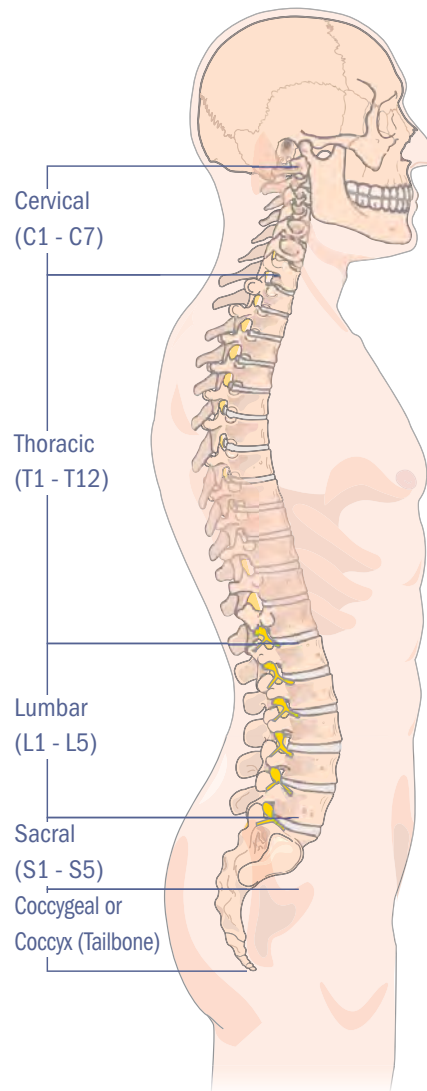


Dietitian: Registered dietitians are licensed professionals trained to evaluate nutrition status and make recommendations for special diets and supplements based on each patient's plan of care. They also keep caregivers updated on current nutrition information and work to ensure patient satisfaction with food served.

Other team members that you may meet include pharmacists, lab technicians, X-ray technicians, patient transporters, respiratory therapists and chaplains.

Getting to Know Your Spine

- It is important to understand how your neck and back function so you can protect your spine before and after surgery
- A healthy spine shelters the spinal cord and supports the body while allowing it to move freely
- It does this with the help of the three natural curves, strong & flexible muscles, and soft cushioning discs
- The spine is composed of 33 bones called vertebrae
- The vertebrae are separated by a shock absorber called a disc, and flexible joints that slide to allow movement

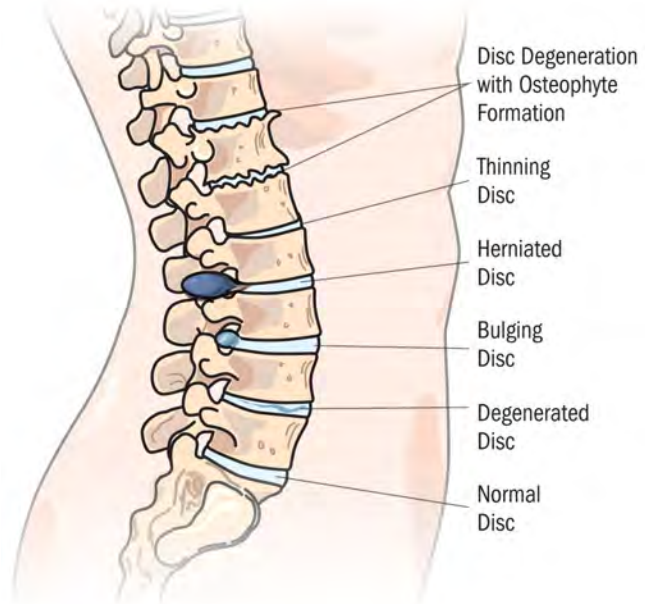
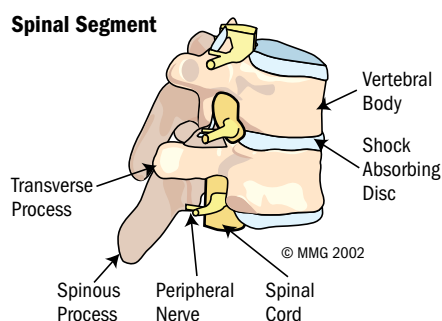
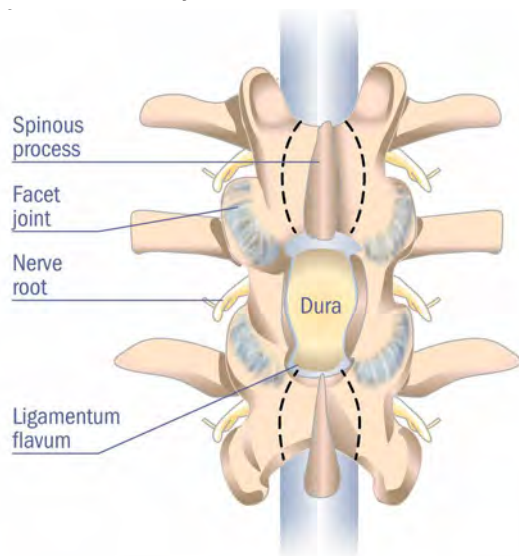


Spinal Issues

Back and neck pain can be caused by a number of factors:

- Inherited – skeletal / structural
- Injuries – work / living conditions
- Fractured or compressed vertebrae
- Disease process – Arthritis, Degenerative Disc Disease, Osteoporosis

*Note not all back and neck pain is treated the same way



Arthritis – breakdown of cartilage between bones, bones can rub together, causing inflammation and pain.

Degenerated Disc – small ruptures or tears in the outer covering (annulus).

Bulging Disc – tears or ruptures in the inner lining of annulus, causing the jelly-like nucleus to bulge outward.

Herniated Disc – a complete tear or rupture of the outer covering, causing the jelly-like nucleus to ooze out and push against the spinal nerves.

Osteophytes – bony overgrowth from the vertebra causing bone spurs; can pinch nerves depending on the location on the vertebrae.

Spinal Instability – vertebrae can slide back and forth.

Spinal Stenosis – narrowing of the opening in the spinal canal.

Spondylolisthesis – the vertebrae slips forward onto the vertebrae below it.

The Risks of Spine Surgery

Spine surgery is major surgery and although advances in technology and medical care have made the procedure very safe and effective, there are risks. These risks should be considered carefully before you decide to have surgery. You are encouraged to discuss the potential risks with your spine surgeon, primary care physician and your family.

Every measure will be taken by your care team to minimize the risks and avoid complications. Although complications are rare, they do sometimes occur. The team will make every effort to avoid the most common risks, which include:

Blood Clots: Blood clots can form in a leg vein or in your lungs after spine surgery and can be dangerous. Blood clots are more common in older patients, patients who are obese, patients with a history of blood clots, patients who smoke and patients with cancer.

Infection: Infection is not common in healthy patients having a spine surgery. Patients with chronic health conditions, like diabetes or liver disease, or patients who take some forms of corticosteroids, are at higher risk of infection after any surgery. Superficial wound infections are usually treated with antibiotics. Deeper infections inside the spine may require additional surgery.

Nerve, Blood Vessel and Ligament Injuries:

Damage to the surrounding structures in the spine, including nerves, blood vessels and ligaments, are possible but extremely rare. More commonly there is numbness in the area of the incision which usually, but not always, resolves in six to 12 months.

Wound Healing: Sometimes the surgical incision heals slowly, particularly if you take corticosteroids or have a disease that affects the immune system, such as rheumatoid arthritis or diabetes, or if you are a smoker.

Hematoma: Bleeding into the spine can occur either immediately after surgery or at a later time. This is accompanied by acute pain and swelling and is sometimes confused with infection.

Spinal Fluid Leak: A hole or tear in the Dura (an outer covering that surrounds and cushions the spinal cord) allowing cerebrospinal fluid to leak out. You may experience a headache when sitting upright or standing.

You can also help reduce your risks of these complications by:

- Reducing or eliminating the use of tobacco and alcohol
- Being compliant with managing your diabetes, if applicable
- Maintaining a healthy diet
- Using good hand-washing techniques
- Performing your exercises as directed by physical therapy
- Limiting high-impact activities as directed by your spine surgeon

General Information about Spine Procedures

Anterior Cervical Discectomy and Fusion (ACDF)

Anterior cervical discectomy and fusion is the most common procedure for cervical radiculopathy. Radiculopathy is a description of a problem in which one or more nerves are affected and do not work properly. It restores alignment of the spine, maintains the space available for the nerve roots to leave the spine, and limits motion across the degenerated spine segment.

“Anterior” means that your spine surgeon will approach your neck from the front. The surgery involves operating from the front of the neck through a 1- to 2-inch incision along the neck crease.

During the procedure, the problem disc is removed. The left over area is stretched, so that the height is similar to what it was prior to the disc wearing out. A bone graft is placed in the space where the disc was removed. This increases the space in the foramen for the nerve to leave the spine and improve arm pain and neurological symptoms.

After the bone graft is placed, the two vertebrae next to the removed disk are fused together. The fusion eliminates motion between the degenerated vertebrae.

The Goal

The goal is to lessen pain by limiting painful motion between vertebrae. A metal plate and screws are commonly used along the front of the cervical spine. They provide stability and help increase the rate of fusion. Bone graft is used to fill in the space left after the disc is removed. It is primarily used to stimulate bone healing and help the vertebrae to fuse together into a solid bone. A bone graft can be obtained from the patient’s hip. This type of graft is called an auto graft. Harvesting a bone graft requires an additional incision along the hip and lengthens

surgical time. Although auto grafts have been used with good results, some people may experience pain at the hip for some time. One alternative to harvesting a bone graft is an allograft, which is cadaver bone. An allograft is typically acquired through a bone bank. The use of allograft has grown because it avoids the risk of pain at the donor site. There are risks and benefits for both types of bone grafts, which your spine surgeon will discuss with you.

Motion Preservation Surgery

It has been shown that cervical spine fusion surgery can lead to problems at levels above and below a fusion necessitating future surgery. This is known as adjacent segment disease (ASD) and is thought to be due to changes in the mechanics of the spine from the fusion. Technical error and natural history are theorized as other potential causes. Up to 29% of patients at 10 years have been shown to require secondary surgeries due to ASD. (Boden 1999). There has been emphasis on motion preservation surgeries to help prevent ASD and results are promising. Below are two alternatives to traditional fusion surgery.

Cervical Disc Replacement

It is important to consider several factors when considering cervical disc replacement versus traditional anterior cervical discectomy and fusion. Before delving into that, it should also be established that the main goal of both surgeries is to alleviate arm pain, numbness, weakness, or spinal cord symptoms, not necessarily neck pain. In fact, those with mostly axial neck pain may not be a good candidate for a cervical disc replacement, and are often better off with other non-operative measures. Cervical disc replacement does not increase neck motion, but is meant to preserve more motion than a fusion. The procedure involves a small incision in the front of

the neck and the disc and bone spurs are removed that are pressing on the nerve root or spinal cord as usual. Following this, a metal and plastic device (arthroplasty) is inserted into the disc space rather than some type of fusion device. There is motion between the surfaces of the arthroplasty device that attempt to mimic normal cervical spine motion. Several devices are currently Food and Drug Administration approved, and some are even indicated for more than one level surgery. Not everyone is a candidate for a cervical disc replacement, and in many cases anterior cervical discectomy and fusion may be a better option. If your spine surgeon deems you are a good candidate for the procedure it is a great option that can provide resolution of symptoms and help prevent the need for future surgeries on your neck.

Cervical Laminoplasty

Another motion preservation option in the cervical spine is known as laminoplasty. This procedure is a particular good option in patients with many levels of stenosis and cord compression. It has been shown that approximately 50% of motion in the cervical spine is preserved following this procedure. The surgery is performed from the back of the neck and the spinal column is opened up like a trap door to make more room for the cervical spinal cord. This trap door is then maintained open with small plates and screws, bone grafts, or sutures. It should be noted that not everyone is a candidate for this procedure either. Those with loss of normal alignment, instability, or severe spondylosis (bridging bone spurs) may be better suited with a fusion type surgery. The main goal again is preventing significant loss of motion, and the prevention of future ASD necessitating surgery.

Kyphoplasty

Kyphoplasty is a medical procedure that attempts

to stop the pain caused by a bone fracture and attempts to restore the height and angle of Kyphosis of a fractured vertebra (of certain types), followed by its stabilization using injected bone filler material. Kyphoplasty and vertebroplasty represent the two procedures that percutaneously attempt to augment the strength of fracture or weakened spine bones (Vertebra). The procedure can be performed under either local or general anesthesia, on multiple levels, outpatient or in-patient, and is viewed as minimally invasive. It is most commonly performed for spinal compression fractures caused by osteoporosis, a condition that weakens the bone, and is also sometimes performed for certain other conditions that may have led to a spinal fracture.

Kyphoplasty vs. Vertebroplasty

In comparison to vertebroplasty, kyphoplasty utilizes orthopedic balloons to create a void in a fractured vertebra, restore vertebral body height and correct angular deformity. The void allows a viscous cement to be deposited in a controlled manner stabilizing the fracture. In vertebroplasty, no balloon is used to restore vertebral body height and no cavity is created. Cement is injected into the fractured vertebra stabilizing it in its current state.

Spine Laminectomy

Laminectomy is a spine operation to remove bone and ligament that is causing spinal stenosis and compression of the nerves. An incision is made in the back and the muscles pushed aside to expose the back of the spine. Following this the spinous process, lamina, and ligaments are removed opening the back of the spinal canal, and allowing the nerves to drift back and be decompressed. A laminotomy is simply removal of part of the lamina instead of the entire bone.

Recovery after a spine laminectomy

The recovery period after laminectomy depends on the specific operative technique, minimally invasive procedures having a significantly shorter recovery period than open surgery. Removal of substantial amounts of bone and tissue may require additional procedures to stabilize the spine, such as fusion procedures, and spinal fusion generally requires a much longer recovery period than simple laminectomy. Most commonly, laminectomy is performed to treat spinal stenosis.

Less Invasive Surgery

Many patients have heard of “Minimally invasive surgery (MIS)”. There is no true definition in the medical world as to what constitutes MIS surgery, and we prefer the term less invasive surgery. What really is attempted in these situations is to make smaller incisions to perform the same operation with possibly better early post-operative outcomes (lower risk of infection, less muscle dissection, smaller scars). Underneath the skin incision the same operation is typically performed as with traditional open surgery. Special retractors are often used as well as an operating microscope at times. In many situations, it is not safe or feasible to perform surgery through smaller incisions, and attempting to do so can result in higher risk of complications. A thorough discussion with the spine surgeon with regards to surgical options is always best.

Extreme Lateral Interbody Fusion

Extreme lateral Interbody fusion is a surgical procedure in which the front part of the lumbar spine is fused from the side. The spine surgeon makes an incision in the side between the lower ribs and the pelvis. Instruments pass through muscles and to the disc. Disc material is removed and a fusion graft is placed into the disc space. The graft is usually bone or a cage combined with bone.

The Herniated Disc

Lumbar nerve root pain (often called Sciatica) generally goes below the knee and is felt in the area of the leg that the particular spinal nerve supplies. An intervertebral disc protruding because its tough fibrous wall weakens and is therefore no longer able to contain the gel-like substance in the center sciatica. This material may bulge or push out through a tear in the wall (Herniation) causing pain when it touches a nerve.

Microdiscectomy

A Microdiscectomy is a surgical procedure in which the herniated portion of an intervertebral disc, which is causing pain by bulging into the spinal cord or radiating nerves, is removed using a microscope. A laminectomy is often involved to permit access to the intervertebral disc in a traditional discectomy. This can allow the spine surgeon better access. The goal of this procedure is to decrease the pain and to allow for better movement and function. The intervertebral disc is the structure between the vertebrae (bones of the spine), which act as both a spacer and shock absorber. The disc is composed of two parts: a soft gel-like middle (nucleus pulposus) surrounded by a tougher fibrous wall (annulus fibrosus).

Lumbar Spinal Fusion

Spinal fusion is a surgical technique used to combine two or more vertebrae. Supplementary bone tissue (either auto graft or allograft) is used in conjunction with the body’s natural osteoblastic processes. This procedure is used primarily to eliminate the pain caused by abnormal motion of the vertebrae by immobilizing the vertebrae themselves.

Preparing for Your Spine Surgery

The Memorial Hermann | Rockets Orthopedic Hospital Spine Program experience begins long before your actual surgery. These guidelines will prepare you for a rapid and safe recovery in your quest for improved mobility and health.

To make sure you and your coach are fully prepared for your spine surgery, it is important that you carefully and thoroughly review this Patient Guide and practice your exercises before surgery. The information will help you better understand your diagnosis, the spine surgery process and what to expect every step of the way as you prepare for your Spine Program experience. You will be introduced to the exercises, tips, and activities that will speed recovery and promote success. Please call the Spine Nurse Navigator if you have any questions or concerns regarding this information.

Preadmission Testing

Before your surgery, it is imperative that you take part in the preadmission process. Preadmission testing assures the care team will be completely prepared for your specific needs on the day of surgery.

When you come in for the preadmission appointment, the nurse and clinical team will obtain your:

- Height, weight and vital signs
- Blood and urine testing
- EKG and X-ray
- Medical history review
- Medication review (please bring your medications in the prescription bottle to this appointment)

Fasting is not required prior to lab testing and documents may be signed **at this time**.

Spine Surgery Preoperative Education Classes

To make sure you are fully prepared for your spine surgery, a class has been designed especially for patients like you. The class will help you better understand your diagnosis, the spine surgery process and what to expect every step along your journey to health. You will also be introduced to the exercises, tips and activities you will use to speed recovery and ensure lasting success. This will also be a great time for you to ask any questions about your procedure or recovery.

Attendance at this class is very important because it will provide you with the information you need to have the best experience in the hospital and to be ready to do your part after returning home to ensure a full recovery.

You will be contacted by a member of the spine care team to schedule your preoperative education class once your surgery date has been established.

What to bring to preadmission testing:

- A list of all your current medications
- Valid picture identification
- Health insurance information
- Copy of any Advance Directives (Durable Power of Attorney, Living Will) that you have
- Your coach

Finding a Coach

Recovering from spine surgery is a team effort. It is strongly recommended that you have a coach, family member or friend who is willing to support you every step of the way and who can participate fully in activities before surgery and during your recovery.

It is important to bring your coach with you to your preoperative education class. Your coach's support, encouragement and companionship can make all the difference, not just during your hospital stay but also throughout the weeks before and after your surgery.

Nutrition

Begin increasing protein intake a few weeks before surgery to build up both your strength and your tissues. Eat high quality proteins such as fish, poultry, eggs, nuts and seeds. High-fiber foods (whole grains, vegetables, fruits and legumes), calcium-rich foods (nuts, fruits, some leafy greens, molasses and small amounts of dairy products), and foods containing essential fatty acids (some nuts, seeds, or vegetable oils) are also helpful.

Try to avoid a lot of dairy products, sweets, and baked goods as well as high saturated fatty foods such as fried foods, heavy meats, and cured meats. Your diet can usually be a little lighter a few days before surgery, emphasizing more fruits, vegetables, and liquids. This will help ease the stress on your digestive system.

Avoid stimulants such as coffee and sedatives such as alcohol prior to elective surgery.

Exercise

Keeping your muscles toned will help you to recover faster after surgery. Be sure to follow the exercise program you have been given by your doctor.

Smoking

In preparation for your spine surgery, it is best not to smoke. If you are a smoker, ask your doctor what would work best for you to help you quit smoking. The longer you are smoke free, the healthier your lungs will be. You will also heal better post-surgery.

Medications

You may take your prescription medications as directed by your spine surgeon. These may include Celebrex® and over-the-counter medications such as Tylenol®, Claritin® and Benadryl®. During your preadmission testing appointment, a nurse will review which medications you should take the morning of surgery. Take the designated medications with small sips of water.

Do not bring any medications (prescription, over-the-counter, or illegal drugs) to the hospital. Instead, provide your nurse with a list of current medications you are taking, including dosage and schedule, to review with your physician. All medications you will need to take during your stay will be prescribed by your physician and administered by a trained professional. Some medications could interfere with tests or medications ordered during your treatment.

Medications You May Need to STOP Taking Prior to Surgery

Some medications that you currently take may prove harmful during surgery because they thin your blood and increase the risk of bleeding after surgery, please discuss with your spine surgeon and follow any of their recommendations prior to surgery. If you take the following medications* you must stop taking them prior to your surgery:

- **Two Weeks Prior:** Prescription diet medications, methotrexate and other rheumatoid arthritis medications.

The American Society of Anesthesiology has recommended you stop the following supplements: ginkgo biloba, garlic or garlique, ginseng, glucosamine, green tea (capsule form), kava, Echinacea, St John's wort, valerian, vitamins A, D and E, and fish oil.

- **Seven Days Prior:** Hormone replacement therapy, anti-inflammatory medications (such as ibuprofen, Motrin®, Advil®, Aleve®, naproxen, Relafen® or diclofenac) may need to be stopped prior to surgery. **Your surgeon will advise you which medications to stop.**

- **Note:** If you are on blood thinners, anticoagulants or antiplatelet agents (such as Coumadin®, Plavix®, Effient®), aspirin, compounds containing aspirin, or Trental® you will need special instructions from your surgeon.

Preventing Surgical Site Infection

There are several steps that you can take to help prevent surgical site infections.

Dental Care: All invasive dental work must be completed at least SIX weeks prior to your surgery. You must call the office if any dental problems arise prior to your scheduled surgery date.

Shaving: It is very important that you do not shave your back, neck or use any hair removal products anywhere near the surgical area for FIVE days prior to surgery. Studies show an increased risk of surgical site infection associated with shaving. This is attributed to the microscopic cuts in the skin that allow bacteria to enter.

Note: If hair needs to be removed around the site of your incision it will be done in the hospital prior to surgery.

Clean Hands: Hand hygiene is very important. You will notice your caregivers using alcohol-based hand sanitizer when entering your room. Your family and friends are strongly encouraged to utilize this cleanser, and to wash their hands frequently to prevent the spread of infection. Please remind your medical team, friends and family to wash their hands if you do not see them do so.

Illness: If you become ill with a fever, cold, sore throat, flu or any other illness, please contact your spine surgeon's office.

Skin Rash: Broken skin or rashes should be reported to your spine surgeon's office.

Pre-Surgery Bathing

Beginning approximately one week before your operation, begin using antibacterial soap when you shower. This will generally help reduce the amount of bacteria living on your skin. Any antibacterial soap

found in stores can be used; it may say washes away bacteria or antibacterial.

THE NIGHT BEFORE SURGERY

Take a shower and wash your entire body, including your hair and scalp in the following manner:

- Wash your hair using normal shampoo. Make sure you rinse the shampoo from your hair and body. Wash your face with your regular soap or cleanser.
- Using a fresh clean washcloth/sponge, use CHG (Chlorhexidine Gluconate) wash from your neck down. **Very important.**
- Rinse your body thoroughly. **Very important.**
- Using a fresh, clean towel, dry your body.
- Dress in freshly washed clothes.
- Fresh clean sheets and pillowcases should be used after this shower.
- Do not use lotions, powders, or creams after this shower.

THE DAY OF SURGERY

Repeat the shower in the following manner:

- Wash your hair using normal shampoo. Make sure you rinse the shampoo from your hair and body. Wash your face with your regular soap or cleanser.
- Using a fresh clean washcloth/sponge, use CHG wash from your neck down. **Very important.**
- Rinse your body thoroughly. **Very important.**
- Using a fresh, clean towel, dry your body.
- Dress warmly in freshly washed clothes.
- Do not use lotions, powders, creams, hair products, makeup, or deodorant after this shower.

Specific information on the CHG wash and reminders program may be found online at:

<http://www.memorialhermann.org/patients-care-givers/patient-surgery/>

Tips for Preparing Your Home

You and your family/coach may want to consider these tips to help make your home safe and comfortable when you return from your surgery:

- Purchase a non-slip bath mat for inside your tub/shower.
- Check every room for tripping hazards. Remove throw rugs and secure electrical cords out of your way.
- Determine what items from dressers, cabinets and shelves you will need immediately after returning home. Any items you use often should be moved to counter height to avoid excessive bending or reaching.
- Plan on using a cordless phone or a cell phone. They can be tucked away inside a pocket, carried easily or set within reach.
- Make sure stairs have handrails that are securely fastened to the wall. If you must negotiate stairs inside or outside your home, please discuss this at your preoperative visit.
- If you have pets, you may want to consider boarding them for a few days after your return home.
- A chair with a firm back and arm rests is recommended during your recovery. A chair that sits higher will help you stand more easily. Chairs with wheels should not be used under any circumstances.
- In order to minimize cooking, prepare meals in advance and freeze them. Alternatively, you can purchase prepared meals for convenience.
- Install night lights in bathrooms, bedrooms and hallways.
- Avoid yard work for 10 days prior to surgery. Make arrangements for outdoor work such as gardening or cutting the grass for at least two weeks after surgery.
- Do laundry ahead of time and put clean linens on your bed.
- Arrange for someone to collect your newspaper and mail.
- Since your safety is a primary concern, it is a requirement that your coach, spouse, a family member or friend stay with you after your surgery until you are able to perform activities of daily living independently and safely. Typically, this occurs within a few days after you return home.

Packing for Your Hospital Stay

The following checklist should help you pack for your hospital stay.

Items to Pack

- Clean, comfortable, loose-fitting clothing like button up or zip up shirts, elastic-waist pants, shorts, skirts or jogging outfits for your trip home from the hospital.
- Tennis shoes or shoes with a flat, rubber bottom. Do not bring tight-fitting footwear as your feet may swell a bit following surgery. Do not bring slides or backless slippers.
- Eyeglasses, contact lens cases with solution, hearing aids and dentures/storage.
- If you use a breathing machine such as a CPAP, bring your machine, mask and hose.
- Your insurance card and picture ID.
- Credit card number or check to make any necessary co-payments.

- Your own pillows if you think they would make you more comfortable. To keep them separate from hospital pillows, it is helpful if you place them in colorful pillowcases.
- Your advance directive, either a living will or durable power of attorney for health care. If you do not already have an advance directive, forms will be available at the hospital.
- Reading material for your enjoyment.
- Bring any pre-fitted back or neck braces.

Wi-Fi is available throughout the hospital and in your room.

Items to Leave at Home

Jewelry, cash or valuables of any kind should be left at home or in the care of a trusted loved one.

Your Itinerary: Countdown to Surgery

3-4 WEEKS BEFORE SURGERY

- Surgical clearance appointment with your Primary care physician, cardiologist, or anesthesiologist; if required.
- Perform any ordered tests such as chest X-ray or EKG; MRI within 30 days of surgery, if ordered.
- Attend Spine Surgery Preoperative Education Class.
- Begin your exercise program.
- Begin making arrangements for someone to accompany you to your preoperative appointments if desired, to transport you to the hospital the day of surgery, to drive you home the day you are released from the hospital, and to stay with you upon your return home after surgery.
- Stop smoking and the use of any other tobacco products.

2 WEEKS BEFORE SURGERY

- Start making home preparations. Stop taking Prescription diet medications, herbal supplements, methotrexate and other rheumatoid arthritis medications. **THESE ARE EXAMPLES ONLY. Please discuss all your current medications and supplements with your spine surgeon or primary care physician and follow their directions.**

7-10 DAYS BEFORE SURGERY

- Stop taking arthritis medications, aspirin and blood thinners, as directed by your physician.
- Begin bathing with antibacterial soap.
- Reduce alcohol consumption.
- **Diabetic patients, ask your doctor how your Insulin should be adjusted the day of surgery.**

NIGHT BEFORE SURGERY

- Take a shower as instructed with the CHG wash that was provided to you.
- Pack your bag for the hospital.
- Do not eat, drink or smoke anything after midnight; this includes water, coffee, gum or mints.
- Relax and get a good night's sleep.

DAY OF SURGERY

- Take a shower as instructed, using the CHG wash that was provided to you.
- It is OK to brush your teeth, but do not swallow any water.
- Wear clean, comfortable clothes. Avoid wearing any fragrance, deodorant, cream, lotion or nail polish. Take any medications as instructed, with a **SMALL** sip of water.
- Do not take blood thinners or aspirin unless specifically directed to do so by your spine surgeon. You should take heart, blood pressure and/or seizure medications with a **SMALL** sip of water, as instructed.
- Dentures must be removed prior to surgery but will be returned to you after surgery.
- Contact lenses must be removed prior to surgery.
- Report to the check-in area as instructed.

Day of Your Spine Surgery

Arriving at the Memorial Hermann | Rockets Orthopedic Hospital

The day of your surgery will be a busy one. Please remember not to eat, drink or smoke anything, including water, mints or gum, after midnight the evening prior to your surgery. Several hours may pass between the time you check into the hospital and the time that your surgery is completed. Your family and coach should be prepared for a few hours wait.

It is important that you arrive at the hospital with plenty of time to check in and prepare for surgery. You will be instructed on your expected arrival time by your spine surgeon's office.

Wear comfortable clothes. Wear clothing that is comfortable, loose, easy to put on and take off. Avoid wearing cologne, perfume or fragrances of any kind. Deodorants, creams, lotions and shaving creams should be avoided. Do not wear makeup or nail polish.

Please park and arrive at the entrance as you were instructed.

Surgery Preparation

After you check in at registration, you will be directed to the surgical preparation area. A wristband will be applied at this time. It is important for you to verify that all information on your identification bracelet is correct. We will be asking you to confirm this information many times throughout your hospital stay as one way of ensuring your safety.

Just before surgery, a nurse will review your medical records, take your vital signs, perform a brief physical exam, clean the surgical site and make sure everything is in order. Sometimes, additional tests may need to be performed.

As surgery approaches, a nurse will start an IV. This allows medication and fluids to flow directly into your bloodstream.

Your spine surgeon or physician assistant and the anesthesia provider will visit you in the pre-op holding area prior to surgery. Among other things, your spine surgeon will ask you to identify your procedure and site and will mark the surgical site with a special marker. Your anesthesia provider will ask you a number of questions to help determine the best anesthesia for you.

Family Waiting

On the morning of surgery, your coach, family member or friend will be able to stay with you until you're ready to be transported to the operating room. At this point, they will be escorted to the family waiting area where they will wait while you have surgery.

Once your spine surgery is complete, a member of the surgical team will contact your coach, spouse, family member or friend. At this point, they will be able to speak with the spine surgeon to discuss your procedure.

Patient Privacy

Your family will be given a patient identification card with a personal identification number (PIN). When asking about your current medical status, your family must use your full name along with the provided PIN.

Anesthesia – General Information

Board-certified physician anesthesiologists affiliated with the hospital and certified registered nurse anesthetists (CRNAs) staff the operating room (OR) and the post-anesthesia care unit (PACU).

Your anesthesia provider will meet you before surgery. At that time, he or she will examine you, discuss your medical history, and determine the best plan for your anesthetic care. It is important that you tell the anesthesia provider of any prior problems or difficulties you have had with anesthesia.

He or she will discuss the risks and benefits associated with the various anesthetic options, as well as the potential side effects that can occur with each. Any time you have surgery and anesthesia, there is a chance that you may experience some nausea and vomiting; however, medications are available to treat both and are routinely given ahead of time to try to prevent these symptoms.

What types of anesthesia are available?

Decisions regarding your anesthesia are tailored to your personal needs. The types available for you are:

- General anesthesia – provides loss of consciousness.
- Regional anesthesia – involves the injection of a local anesthetic to provide numbness, loss of pain or loss of sensation to a large region of the body. You may not be able to feel or move your legs until the anesthetic wears off. This effect sometimes lasts for several hours, **so it is important that you do not try to walk until your physical therapist or nurse determines you are ready.**
- Neuraxial anesthesia – involves a local anesthetic placed around the nerves of the central nervous system, such as spinal or epidural blocks.

Operating Room

Inside the operating room, you will be cared for by a team of affiliated physicians, physician assistants, nurses and skilled technicians. The total time required for surgery will be different from patient to patient, depending on the complexity of the procedure.

Wong-Baker FACES Pain Rating Scale



Recovery

After surgery, you will be transported to an area called the Post-Anesthesia Care Unit (PACU) or recovery room. You will spend approximately one to two hours in the PACU while you recover from the effects of anesthesia.

A specially trained nurse will check your vital signs – including blood pressure, respiratory rate and heart rate – and monitor your progress. Pain medications will be provided through your IV as needed. The nurse will check your bandages, check drainage from your surgical site and encourage you to take deep breaths. The nurse will also apply foot or leg compression devices to help with circulation.

After your stay in the PACU, you will be moved to your room in the hospital to begin your recovery.

What to Expect after Surgery

Once you have arrived in your room, nurses will assess you and continue to monitor you frequently until you are stable. You can also expect to have a compression pump on your feet or legs. This pump will squeeze your feet or legs at regular intervals to circulate blood and to help prevent clotting. If you do not feel the compression, be sure to let your nurse know.

Once your vital signs are stable and you have regained movement and sensation in your lower extremities, your physical therapist will assist you to sit at the edge of the bed, stand, and walk.

Do not try to walk until your physical therapist or nurse determines you are ready.

Managing Your Pain

Memorial Hermann considers pain as a fifth vital sign and a critical driver of a patient's blood pressure, pulse, respiration, and temperature. When pain is controlled, patients tend to heal faster, feel better sooner, and get their strength back faster. While we may not be able to take all of your pain away, several methods of pain control, including medication and non-medication treatments, are available to patients.

Comfort Methods

Comfort methods may include a massage, hot or cold packs, positioning, splinting of an incision, use of electrical stimulation, relaxation, listening to music or tapes, meditation, positive thinking, and other activities that distract you from focusing on the pain.

Medication Administration

Our nursing staff gives pain medication in the following ways:

- **Oral:** Oral pain medications are taken by mouth in pill or liquid form. They may also include agents that you place under your tongue.
- **Injection:** An injection is a shot of medication usually given into a muscle.
- **Intravenous:** Medication may also be injected into a vein through an intravenous catheter.
- **Skin:** Skin patches containing pain medications may be applied to the skin for longer-term pain management.
- **PCA Pump:** Patient-controlled analgesia (PCA) pumps allow you to control timing and flow of your pain medication. When you begin to feel pain, you press a button to inject the pain medication through the IV tube placed in your vein.
- **Spinal/Epidural:** For women in labor, or for cesarean delivery and certain other surgical procedures, a combination of epidural and spinal pain medications may be used to control pain.

Please note: Oral pain medication may be routinely scheduled at set intervals or on an as-needed basis within specific time frames. It is important to request pain medication when you first begin to experience pain rather than waiting for pain to become moderate or severe.

Keeping Pain Under Control

Being prepared can help you keep your pain levels under control. Consider writing down your questions about pain and pain control before you see the physician or nurse and be sure to do the following:

- Talk to your nurses and physicians about pain control methods that have worked well for you in the past and those that have failed to help.
- Talk with your nurses and physicians about any concerns you have about your pain medication and about any allergies you have.
- Ask your physicians and nurses what to expect. For example: Will there be much pain? Where will it occur? How long is it likely to last?
- Take your pain medication or ask the nurse for pain medication when the pain starts. This is an important step in proper pain control.
- Take your pain medication before getting out of bed, walking or doing breathing exercises if these activities worsen your pain. It is harder to ease the pain once it has taken hold.

Remember, you have the right to have your pain appropriately assessed and managed.

Communicating Your Pain

If your physician has ordered your pain medication to be administered on an as-needed basis, be sure to alert your nurse when you are experiencing pain.

We ask that you help your healthcare team measure your pain by rating it on a scale of 0 to 10, with a “10” indicating the most severe pain, and “0” indicating no pain.

Reporting your pain as a number helps the physicians and nurses know how well your treatment is working and whether to make any changes. Remember, pain may signal concerns your physicians and nurses need to know about. Don’t automatically assume you need less pain medication just because your pain is under control.

Additional Medications

You can expect to receive IV antibiotics the first day of your hospital stay as well as medications for pain and anticoagulant medications to prevent blood clots. Sometimes, patients may feel nauseous or constipated. Both symptoms can be managed with medication so it is important that you talk with your nurse if you do not feel well.

Deep Breathing, Coughing and the Incentive Spirometer

You will receive a device called an incentive spirometer. The spirometer helps you fully expand your lungs and keeps them active in order to prevent chest congestion. You may practice coughing after using the incentive spirometer to make sure your lungs are clear.

Early Ambulation

You may walk with the assistance of a physical therapist or nurse when it has been determined that you are stable. Early ambulation is the key in recovering quickly and with fewer complications.

A physical therapist will help you begin your therapy routine and provide instructions for home activities. These activities are designed to help with back safety and how to perform home activities properly using proper body mechanics.

To ensure maximum success, it is important that you take part in physical and occupational therapy as ordered while you are in the hospital and continue walking after you are dismissed to home.

On the first day after surgery it is likely that you will use a walker for stability until you are safe to walk without any assistive device.

Walking is an important part of your therapy. You will be walking with assistance 25 to 50 feet in the morning and aiming for 75 to 100 feet in the afternoon. Your walking goal is 250 feet or more if you can tolerate it.

If you have met all your therapy goals you will be ready to transition to home. This typically occurs in approximately two days.

Fall Prevention Program

After spine surgery, you may be considered at risk for a fall. Always call for assistance and **wait** for the nurse if you want to get out of bed for any reason.

Remember to use the call bell. Tell the person answering what you need and then **wait** for assistance.

If it is determined that you are in danger of falling due to the inability to remember the prevention instructions, further safety measures may need to be taken.

Please be assured these measures are taken for your safety and welfare.

Transitioning Home

Congratulations! You have achieved an important milestone – you are headed home! A big part of your journey is now behind you, though another is just beginning. There are some important considerations for you to keep in mind as you enter this next phase of recovery.

Preparing to Return Home

You will be ready to go home once you're able to walk safely and perform your exercise program and your spine surgeon determines that you are ready for dismissal. You must arrange for someone to stay with you when you go home or you will not be released from the hospital in a timely manner.

The following check points will be used to assess when it is safe for you to go home:

- Get in and out of bed
- Get up and down from the chair and toilet
- Walk with assistance up to 250 feet
- Use the stairs if you have them at home
- Get dressed
- Get in and out of your car
- Perform your therapy program and precautions on your own

Before you go home, members of your care team will make sure that all your dismissal needs are met. Your spine surgeon may order medication for pain based on your individual needs.

You can also expect:

- Written instructions from your spine surgeon.
- Information for physical therapy depending on your individual need or may be done after your follow-up appointment with your spine surgeon.
- Information to schedule your follow-up appointment with your spine surgeon.

The Drive Home

You will need to arrange for your coach, family member or friend to drive you home. To make your ride more comfortable, your driver should bring pillows for you to sit on, slide your seat back, and recline the seat slightly.

Diet and Rest

Eat a healthy diet to promote healing. You may experience decreased appetite after surgery. This is normal and should gradually resolve.

Take rest breaks as needed during the day and get a good night's sleep to support the healing process. It is common to have difficulty sleeping after surgery, but this will gradually improve.

You may sleep on your back, or on your side with a pillow between your legs for comfort.

Nutrition after Your Surgery

Calorie and protein needs are greater after your surgical procedure. It is recommended that you aim for 3 meals a day and snacks as tolerated. Also aim to include 1-2 protein sources at each meal. This will help to ensure that you are consuming adequate protein and calories for healing.

Protein sources

- 3-4 ounces of Beef
- Poultry
- Eggs
- Fish

Vegetarian protein sources

- Soy
- Beans
- Legumes, dried beans
- Whole grain and enriched breads
- Tofu
- Nuts
- Seeds
- Peanut butter

Dairy protein Sources

- Milk
- Yogurt
- Cheese

Protein is the building block to healing. Try to include 1-2 sources at each meal or at snack time.

A healthy, balanced diet is the key to a speedy recovery.

Iron Needs

The smallest amount of blood loss during surgery can deplete your iron levels. Therefore, your spine surgeon or physician may prescribe supplements.

Below is a list of high iron foods that you can consume to improve your levels.

- Organ meat, like liver
- Wheat germ
- Fortified breakfast cereals
- Prune juice
- Dark green leafy vegetables
- Egg (yolk)
- Dark molasses
- Oysters, clams, scallops, shrimp
- Lean beef, pork, lamb
- Chicken, turkey
- Dried apricots, dried peaches, prunes, raisins

Iron is needed to help carry oxygen throughout your body. If your iron is low you may feel tired, dizzy, get headaches, not be able to sleep and feel somewhat irritable.

Iron is best absorbed if you take your iron supplement or eat iron rich foods with foods that are high in vitamin C like orange, grapefruit, cranberry or tomato juice. Do not take your iron supplement with milk, tea, or coffee.

Other Vitamin C Rich Foods Include:

- Citrus juices
- Oranges, lemons, limes
- Cantaloupe, papaya
- Strawberries, kiwi
- Broccoli, cauliflower, brussel sprouts
- Potato
- Spinach and other greens
- Sweet peppers, chili peppers Tomatoes

Exercise

Following your discharge from the hospital, a program for rehabilitation exercises is usually ordered after your post-operative follow up visit with your spine surgeon and you have been cleared to perform physical activity. Your spine surgeon and physical therapist will determine the type and amount of exercise you should be doing to assist you in returning to your normal, active lifestyle. Early motion is the key to a successful recovery. Walking is the best exercise at this point until you have been cleared by your spine surgeon.

Prior to your discharge, a physical therapist will provide you with information for home activity using proper body mechanics, precautions and back safety. For maximum benefit, follow the instructions that were provided.

Avoid resistance training or swimming until cleared by your spine surgeon.

Your recovery process and continued health depends on good nutrition, rest and proper exercise.

Medications

Be sure to take your pain medications by mouth with a meal or snack. Take your medication as directed on the prescription label. Avoid drinking alcohol or driving while taking prescribed pain medication. Consider taking pain medication 30 minutes prior to performing the prescribed physical therapy exercises.

If you need a refill on your pain medication, contact your pharmacist. The pharmacy will contact your spine surgeon. You may begin to substitute acetaminophen (Tylenol) for the prescription medication at any time.

It is normal to experience a deep ache through the bone after surgery.

Some people experience constipation while taking pain medication. This is a common side effect of this medication. You may consider spine:

- Eat a diet high in fiber
- Drink plenty of water
- Take stool softeners/laxatives if needed
- Exercise (**Walking** until cleared to perform other exercises)

Resume your home medications as instructed by your physician.

Incision Care

Follow the instructions for incision care given by your surgeon.

Follow-up Physician Visit

You will see your spine surgeon or physician assistant for a follow-up appointment about two weeks after surgery and routinely thereafter.

When to Call Your Spine Surgeon

- A fall
- Numbness, weakness or tingling in your arm or legs that was not there before surgery
- Pain not relieved by medication or pain that is getting worse
- Drainage (white, yellow or green) from the incision site
- Swelling that persists around your incision site
- Redness that has increased around your incision
- Nausea, vomiting or chills
- Temperature over 101 F (38.3 C)
- Worsening constipation, abdominal pain
- Toes or fingers that are very cold and do not get warm when you cover them

*** It is rare, but if you experience chest pain, palpitations or difficulty breathing, please call 9-1-1.**

Exercises and Mobility

The following pages contain a list of basic exercises that are safe for you to perform before and after your spine surgery. These exercises are important to perform before surgery in order to set your spine up for success following your procedure. These muscles will not want to work due to pain and inflammation, therefore the more frequently you work on contracting them, the more stable your spine will be.

It is important to be as fit as possible before undergoing spine surgery. This will make your recovery much faster. These exercises have been specially designed by physical therapists on staff with the Memorial Hermann | Rockets Orthopedic Hospital Spine Program.

Performing these exercises regularly and properly is perhaps the most important factor in assisting with recovery and determining the long term success of your spine surgery. Keep in mind that the exercises are designed to strengthen muscles around your back and neck to help improve mobility. These exercises are not always easy after surgery, but important. Please make sure that you have been cleared by your spine surgeon to perform these exercises after surgery during your follow up visit. Your spine surgeon will let you know if you should omit any of the exercises. Remember that walking is the best exercise that you can do until your follow up visit.

If you experience severe pain with any exercise, you should stop immediately.

Cervical Pre/Post-Operative Spine Exercises

Seated Scapular Retraction

Reps: 20 / Sets: 1 / Hold: 1 / Weekly: 5x / Daily: 3x

Setup

- Begin sitting in an upright position **(1)**.

Movement

- Gently squeeze your shoulder blades together, relax and then repeat **(2)**.

Tip

- Make sure to maintain good posture during the exercise.



Corner Pec Stretch

Reps: 3 / Sets: 1 / Hold: 30 / Weekly: 5x / Daily: 3x

Setup

- Stand facing a corner with forearms on the wall and shoulders at 90 degrees **(1)**.

Movement

- Lean body forward to feel a stretch in the front of your chest **(2)**.

Tip

- Keep stretch pain free.

**Standing Cervical Retraction**

Reps: 10 / Sets: 2 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

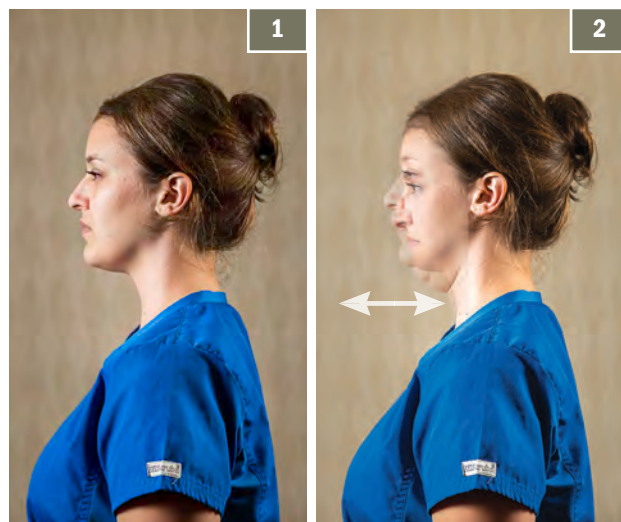
- Begin in a standing upright position **(1)**.

Movement

- Gently draw your head directly backward, while keeping your eyes fixed on something in front of you **(2)**.

Tip

- Make sure that you do not look down as you do this exercise, or bend your neck forward.



Shoulder Blade Squeeze

Reps: 12 / Sets: 2 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

- Begin in an upright standing position with your arms by your sides, holding a resistance band in both hands. Bend your elbows to approximately 90 degrees with your palms up **(1)**.

Movement

- Slowly rotate your forearms out to the side. As you do so, pinch your shoulder blade down and back together. Pause briefly, then return to the starting position **(2)**.

Tip

- Make sure that you keep the bend in your elbows as you rotate your arms. Avoid shrugging your shoulders.

**Ankle Pumps**

Reps: 20 / Weekly: 5x / Daily: Every hour while awake

Setup

- Lying on your back with legs straight (can also be performed while sitting in a chair)

Movement

- Pull toes up, and then point toes down

Tip

- Perform as often as possible, especially if not active. Helps to decrease the risk of blood clots.

****Walk 30 minutes a day at least 5 times a week****

Lumbar Pre/Post-Operative Spine Exercises

Supine Transversus Abdominis Bracing – Hands on Stomach

Reps: 10 / Sets: 3 / Hold: 10 / Weekly: 5x / Daily: 3x

Setup

- Begin lying on your back with your knees bent, feet resting on the floor, and your fingers resting on your stomach just above your hip bones **(1)**.

Movement

- Tighten your abdominals, pulling your navel in toward your spine and up. You should feel your muscles contract under your fingers. Hold this position, then relax and repeat **(2)**.

Tip

- Make sure to keep your back flat against the floor and do not hold your breath as you tighten your muscles.



Quadruped Transversus Abdominis Bracing

Reps: 10 / Sets: 3 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

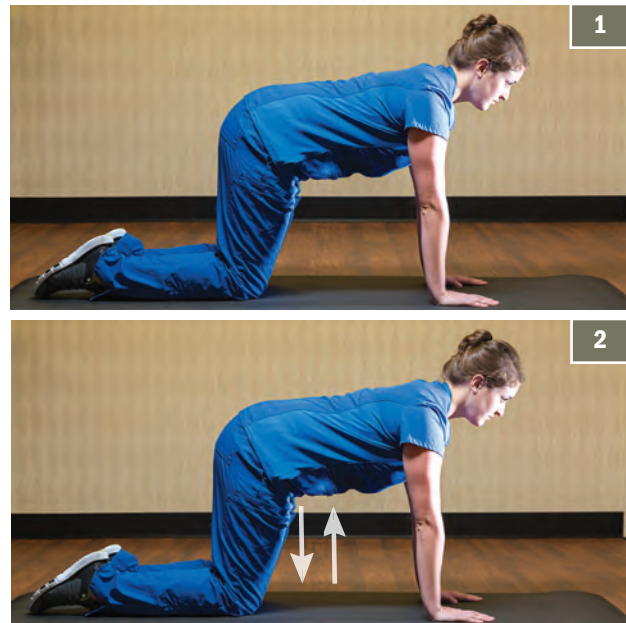
- Begin on all fours **(1)**.

Movement

- Gently release your abdominal muscles, letting your belly relax toward the floor. Then tighten your muscles, pulling your navel in and up towards your spine. Then relax and repeat **(2)**.

Tip

- Make sure to not hold your breath as you tighten your muscles.



Hooklying Gluteal Sets

Reps: 10 / Sets: 3 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

- Begin lying on your back with your knees bent and heels on the floor **(1)**.

Movement

- Tighten your buttock muscles, digging your heels into the floor, then release and repeat **(2)**.

Tip

- Make sure to keep your low back flat on the floor during the exercise.

**Standing Heel Raises**

Reps: 10 / Sets: 3 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

- Begin in a standing upright position in front of a counter or stable surface for support **(1)**.

Movement

- At the same time, slowly raise both heels off the ground, and then lower them down to the floor and repeat **(2)**.

Tip

- Make sure to maintain an upright posture and keep your weight on the balls of your feet when you lift your heels.



Plank on Knees

Reps: 10 / Sets: 3 / Hold: 5 / Weekly: 5x / Daily: 3x

Setup

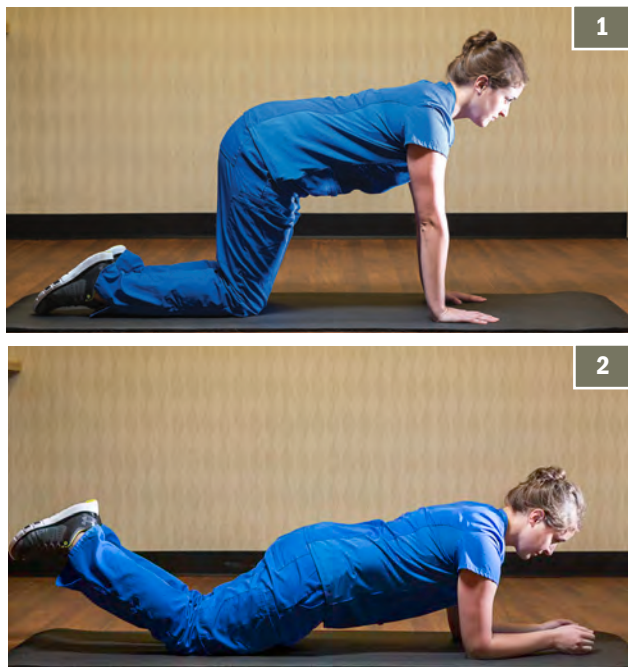
- Begin on all fours **(1)**.

Movement

- Lower your body into a plank position, keeping your knees on the ground and your elbows directly underneath your shoulders. Hold this position **(2)**.

Tip

- Make sure to keep your back straight and look straight down between your hands during the exercise.

**Ankle Pumps**

Reps: 20 / Weekly: 5x / Daily: Every hour while awake

Setup

- Lying on your back with legs straight (can also be performed while sitting in a chair)

Movement

- Pull toes up, and then point toes down

Tip

- Perform as often as possible, especially if not active. Helps to decrease the risk of blood clots.

****Walk 30 minutes a day at least 5x a week****

Exercise / Activity: Do's and Don'ts

- Walking is encouraged to regain your strength. Take short walks a few times a day. Moderation is the key, stop before the point of fatigue or pain.
- Rest often as you will become fatigued easily after surgery.
- Change positions frequently, get up and move every 45-60 mins.
- If you have a brace, wear as prescribed by your spine surgeon.
- You may climb stairs with caution
- Sex is permitted as long as no pain or strain on your back muscles, consult your spine surgeon.
- Avoid low chairs or seats.
- Avoid BLT's - Bending, Lifting (10 lbs or more.), or Twisting (excessive from side to side) until cleared to do so.
- Avoid curbs, gravel or uneven surfaces.
- Avoid back exercises until cleared by your spine surgeon.
- Do not drive or return to work until cleared to do so by your spine surgeon, always wear your seatbelt.

Activities Allowed & Encouraged

- Do as much as you can for yourself safely. Be sure to follow the spine precautions carefully.
- Walk at home frequently (at least 3-4 times) during the day and outdoors if possible with your coach. Use your brace and/or walking aid if recommended by the spine surgeon or physical therapist.
- Perform the exercises as recommended by your spine surgeon or physical therapist daily.
- Get frequent periods of rest through the day so you do not over fatigue your back and or neck muscles.
- Make sure you can touch the floor with both feet, then place your feet 6-8 inches apart.
- Place one foot slightly behind the other to maintain your balance.
- Keep your back straight at all times.
- Lean slightly forward at the hips and push up using your arms and legs. Use an armrest, rail or other sturdy surface for support if you need help balancing.
- Use your thigh muscles to help you rise and stand.

Getting Into and Out of Bed

Log Rolling

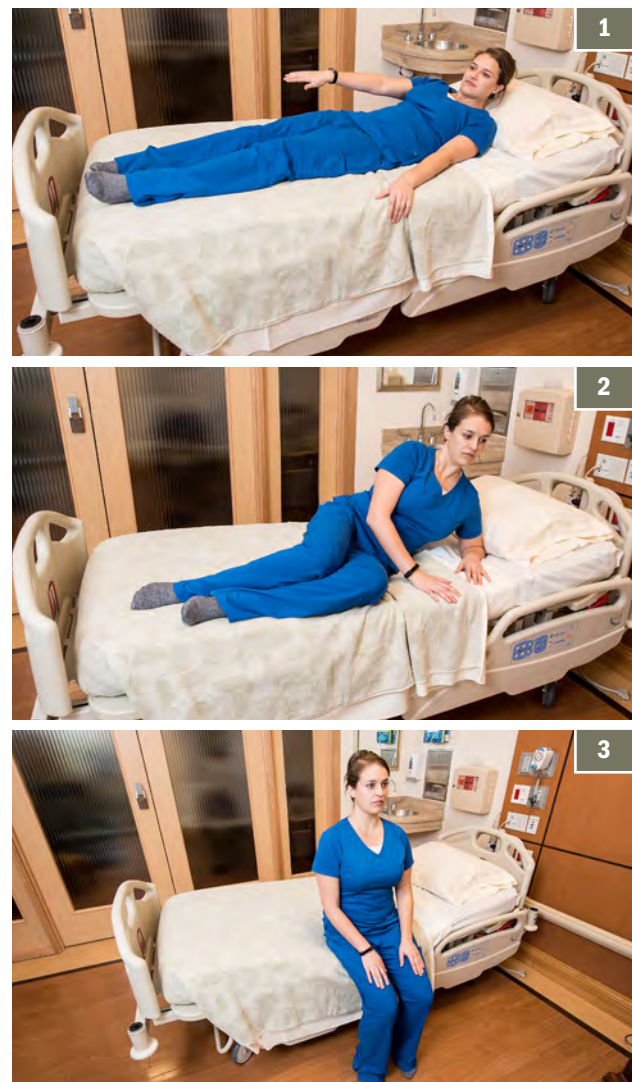
The first or second day after surgery, you'll sit on the edge of your bed and then stand. To get out of bed, follow these steps:

- Gently roll to your side **(1)**.
- Push yourself up, slowly, onto the elbow on that side **(2)**.
- Bend your knees, keeping your legs together. Let your legs swing over the edge of the bed **(3)**.
- At the same time, use your elbows and hands to push yourself up to a full sitting position. (A bedside armchair might help if you have difficulty pushing yourself up.) Keep your back straight.
- After you are sitting in a balanced position, scoot your hips forward until both feet touch the floor.
- Keep your back straight and come to a standing position using your thigh muscles. (See Preparing to Stand, below.)

Do not get out of bed by sitting up and swinging your legs over the side. That puts strain on your back.

Preparing to Stand

Before you attempt to stand, slide as close to the front of your seat as you can. Then:



Personal Grooming, Showers and Baths

- If your sink is lower than your waist, consider sitting in a chair while brushing teeth or washing your face.
- If your sink is waist level or higher, be sure to bend from your hips and knees slightly, keeping your neck and back straight.
- Wash your hair while standing or sitting in a shower (use a shower chair if you have one).
- Use a bath mat or slip-resistant strips on the shower floor. Make sure the floor is dry before you step onto it.
- To avoid twisting and bending, use soap-on-a-rope, a long-handled scrub brush, or a hand-held shower nozzle to extend your reach.
- The most difficult areas to wash, without bending forward, are your legs and feet. When washing your legs and feet, use a long handle shower brush/sponge.

Dressing

- It is important that you plan for your wardrobe needs following surgery ahead of time (at least 1 week prior to surgery).
- You will need assistance doing your laundry for a period of time after your surgery.
- Listed below are some tips that may make dressing easier immediately after surgery:
 - While you are recovering from surgery, avoid using bottom drawers, closet floors or overhead storage bins to store your clothes.
 - Before dressing, gather the clothes you plan to wear (including socks and shoes), so you do not have to make multiple trips to your closets and drawers.
 - Select comfortable, loose-fitting clothes and slip-on shoes.
 - Sit on the edge of a bed or chair to dress rather than stand.

- Wear button-front shirts and front zippered jackets rather than pull-over type garments.
- Use your reacher, sock-aid and shoe horn to put on socks and shoes

Using a Toilet

- Use a raised toilet seat to avoid bending when trying to sit on the toilet. Bend at your knees and use safety grab bars or use a cane/walker for balance.
- Do not let yourself fall to the seat
- Be sure toilet paper is easy to reach and does not require a twisting motion to grasp it.
- If you have trouble reaching for hygiene after toileting, a toilet tissue aide may be needed that will extend your reach

Getting into a Vehicle

You may sit in the front passenger seat when riding in the car; recline the seat for comfort.

Use pillows behind your back for comfort

- To sit down, have your back to the seat
- Use the back of the seat & the door for support as you slowly lower yourself to the seat
- Bring legs into the vehicle one at a time as you rotate your head and shoulders toward the front
- Move your shoulders and hips as a unit
- If you have a high vehicle, use a small step stool or have the vehicle pulled up to the curb to increase stability when getting in and out.
- Riding in the car should be limited to essential travel over short distances and may be more comfortable with the seat slightly reclined.
- On long trips, you should get out of the vehicle and stretch at least every 20-30 minutes to relieve the stress of prolonged sitting.
- Check with your spine surgeon or physician regarding when you may drive.

Frequently Asked Questions

How often will I see my spine surgeon after surgery?

It is likely that you will see your spine surgeon or his or her physician assistant every day while you're in the hospital recovering. Your spine surgeon will also want to see you for follow-up appointments in his or her clinic after you are discharged from the hospital.

How do I know if my incision is infected?

After surgery, you will notice discolored skin, some swelling and drainage around your incision. This is normal. If you experience painful redness, abnormal swelling or thick, bad-smelling drainage from your incision, you may have an infection. A temperature over 101 degrees also may indicate an infection.

When can I take a shower?

Most patients may be able to shower on the second day after surgery, while still in the hospital or at home. When you return home, you may need special equipment, like a bath mat, hand-held showerhead or shower seat to help you bathe comfortably and safely. Your spine surgeon may also instruct you to cover your incision when you shower.

When will I be able to drive again?

You should not drive a car or other motor vehicle until your spine surgeon says it's OK to do so. You must be off pain medications before you will be cleared to drive again. Your spine surgeon should let you know at your follow up visit when it is safe to drive again.

Do I need to wear a neck collar or back brace?

A brace or collar may help provide extra support after surgery. Your spine surgeon will decide if a collar or brace is needed depending on the type of surgery and you as an individual. In some cases, a brace or collar is not needed.

How should I sleep at night?

You may sleep on your back or on either side, depending on what makes you most comfortable with pillows for positioning. A member of the spine care team such as the physical therapist will show you these positions before going home.

When can I return to work?

It depends on the type of surgery you had done and what type of work you do. Please discuss with your spine surgeon.

When can I play sports again?

You will have a few precautions during your recovery time. Walking is the best activity until your spine surgeon has cleared you to participate in other activities. You are encouraged to move frequently. Discuss with your spine surgeon when you are able to get back to normal activities.

Information from American Academy of Orthopedic Surgeons: orthoinfo.aaos.org, 2011.

Medication Log

[illegible]

Notes

[illegible]

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Spine Program Home Evaluation Form

(Please complete before Day of Surgery.)

First Name: _____ Last Name: _____

How you like to be addressed: _____ Surgeon's Name: _____

Date of Surgery: _____ Type of Surgery: _____

Patient Goal: _____

Living Situation TODAY

- Live: ☐ Alone ☐ With family ☐ With a spouse ☐ Other
Is assistance available and are they willing to assist with care? ☐ Yes ☐ No
- Live in a: ☐ House ☐ Senior high rise ☐ Apartment ☐ Assisted living ☐ Other
- Home is: ☐ One level ☐ 2-story ☐ Split level ☐ Apartment/elevator ☐ Apartment/stairs

Steps You Will Use At Home After Surgery

- Steps in home (Please mark all that apply to your home situation):

Number of steps: _____

Front steps: _____ Railing: Single / Bilateral Split-level steps _____ Railing: Single / Bilateral

Garage steps: _____ Railing: Single / Bilateral Basement _____ Railing: Single / Bilateral

Back steps: _____ Railing: Single / Bilateral Upstairs _____ Railing: Single / Bilateral

Open back steps: ☐ Yes ☐ No (can see through them in back)

Bathroom Access

Please mark all that apply to your home situation:

- Bathroom has: ☐ Walk-in shower ☐ Tub only (height of tub _____) ☐ Combination tub & shower
☐ Fixed shower head ☐ Hand-held showerhead ☐ Curtain
☐ Shower door ☐ Bar or support near shower

How wide is entrance of the shower doors? _____

Toilet height: _____ Elevated seat? ☐ Yes ☐ No Bar or support near toilet? ☐ Yes ☐ No

- Access to the following equipment:

☐ Bath bench/seat ☐ Commode ☐ Non-skid bath mat or decals ☐ Wall-mounted grab bar
☐ Tub grab bar ☐ Hand-held showerhead ☐ Elevated toilet seat ☐ Walker ☐ None

- Equipment currently have and/or using:

☐ Bath bench/ seat ☐ Commode ☐ Non-skid bath mat or decals ☐ Wall-mounted grab bar
☐ Tub grab bar ☐ Hand-held showerhead ☐ Elevated toilet seat ☐ Leg lifter
☐ Reacher ☐ Long shoe horn ☐ Sock aid ☐ Crutches
☐ Walker basket ☐ Wheelchair ☐ Elastic shoelaces ☐ Wheeled walker
☐ Walker ☐ Cane ☐ Long-handled sponge ☐ None

Getting Around

- Walks before surgery: ☐ Without cane/walker ☐ With a walker ☐ With a cane ☐ With crutches
- Walks: ☐ Outdoors ☐ Indoors only ☐ 0-6 blocks ☐ More than 6 blocks
- My bed is _____ inches from the floor to top of mattress.
When lying down in bed, which side do you exit from? ☐ Right side ☐ Left side
Could you use the other side? ☐ Yes ☐ No Mattress: ☐ Soft ☐ Firm
- Will walker fit in home before surgery? ☐ Yes ☐ No
Are there things blocking your pathway? ☐ Yes ☐ No
- Have rugs been picked up? ☐ Yes ☐ No

13. Have the most used dishes been placed at or above sink level as well as things you will use in the bathroom and bedroom at a height that is easy to get to? ☐ Yes ☐ No

14. Is there a chair in the home to use after surgery? ☐ Yes ☐ No

(e.g., a high/firm chair)

Will you need to get a chair to use after surgery? ☐ Yes ☐ No

15. At this time, my plans at discharge are:

☐ Return home alone ☐ Home with outpatient therapy ☐ Home with family

☐ To relative's home ☐ Home with home care ☐ Rehab facility ☐ I do not know

16. Equipment needed after surgery: _____

Activities of Daily Living

In home, the following are done by:

17. Cooking meals/clean up	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Laundry	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Shopping	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Cleaning (dusting, vacuuming, etc.)	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Driving/transportation	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Household maintenance	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Yard work	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other

18. Name of agency assisting with above tasks: _____

19. Dressing (putting on/taking off)

Shirt/blouse/dress	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Bra/fasteners	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Slacks/undergarments	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Shoes	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Socks/nylons	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other

20. Bathing

Sponge bath	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Shower stall	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
Shower/tub	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other

21. Transfers

In/out of chair	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
In/out of bed	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
In/out of toilet	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
In/out of tub/shower	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other
In/out of car	<input type="checkbox"/> Self	<input type="checkbox"/> Spouse	<input type="checkbox"/> Agency	<input type="checkbox"/> Other

22. Name of agency assisting with the above: _____

23. Previous injuries/problems:

☐ Shoulder arthritis
☐ Shoulder replacement ☐ Right ☐ Left ☐ Both
☐ Rotator cuff injury ☐ Right ☐ Left ☐ Both
☐ Other joint problems
☐ Previous hip replacement
☐ Previous knee replacement

Spine surgery:

☐ Laminectomy ☐ Laminoplasty
☐ Decompression ☐ Kyphoplasty
☐ Discectomy ☐ Fusion ☐ Other
☐ Left ☐ Right ☐ Anterior ☐ Posterior
☐ Cervical ☐ Thoracic ☐ Lumbar ☐ Sacral

24. Comments: _____



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