

Spine Surgery: a Personal Planner



UW Medicine

VALLEY
MEDICAL CENTER

Remarkable things happen here.™

The Spine Center: a Personal Planner

Valley Medical Center

Renton, Washington

Printed in the United States of America

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For information or permissions, write to:
Marketing and Community Relations
Valley Medical Center
PO Box 50010, RCC-260
Renton, WA 98058
marketing@valleymed.org

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Award-winning Care at The Spine Center

HealthGrades®

Recognized as a Distinguished
Hospital for Clinical Excellence
2015 – 2017

Recognized as one of America's
100 Best Hospitals for Critical Care
2015 – 2017

Recognized with Spine Surgery
Excellence Award
2015 – 2016

BlueCross BlueShield Association

Blue Distinction Center in Spine Surgery

The Joint Commission National Quality Approval

Three-year, full accreditation in 2016
for our commitment to meeting national
and safety performance standards

Washington State Hospital Association

Partnership for Patients Achieving
Best Care Award

Healthcare Equity Index

Leader in LGBT Healthcare Equality

Welcome to The Spine Center

The Spine Center Neuroscience Institute

UW Medicine

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Welcome to The Spine Center!

Congratulations on your decision to tackle the spinal issue that has caused you great pain and diminished your quality of life. Every member of The Spine Center at Valley Medical Center is ready to help you take your next step.

Whether it means resuming walks with your dog, chasing grandchildren or bicycling in the early morning drizzle, regaining a life worth living is defined differently for each of us. The Spine Center surgeons and staff are here to help alleviate the effects of wear and tear or aging and allow you to take your next stride forward.

Spine conditions can affect individuals of all ages and walks of life. Each condition and patient is unique. Our skilled staff has identified ways to treat you individually, yet standardize our protocols, to achieve superior outcomes. I have worked with our dedicated staff to design a program to help you back to your much wanted, much needed, active life.

Your time at The Spine Center will focus on you. We will provide you treatment, education and motivation. Your job will be to take what you have learned, apply it daily and share it with those who will assist you in your recovery. We will be available to help you through each step of your journey.

Sincerely yours,



David A. Lundin, MD
Medical Co-Director, Neurosurgery
The Spine Center at Valley Medical Center
Neuroscience Institute

From Your Surgeon

Basic Information About Your Surgery

Surgery to be performed: _____

Doctor: _____

Surgery date: _____

Hospital arrival time: _____

Estimated surgery time: _____

You may NOT eat or drink after: _____

Special instructions: _____

Call Pre-registration at 425.251.5193, 7 business days before surgery.

Stop anti-inflammatory medications 5 days before surgery.

If you are having a lumbar fusion, we strongly encourage you to attend our Spine Center Educational Seminar held in The Spine Center Conference Room located on the 5th Floor of Valley Medical Center's South Tower. The next seminar will be held on _____.

After Surgery

Your follow up appointment is on _____ at _____ AM / PM with:

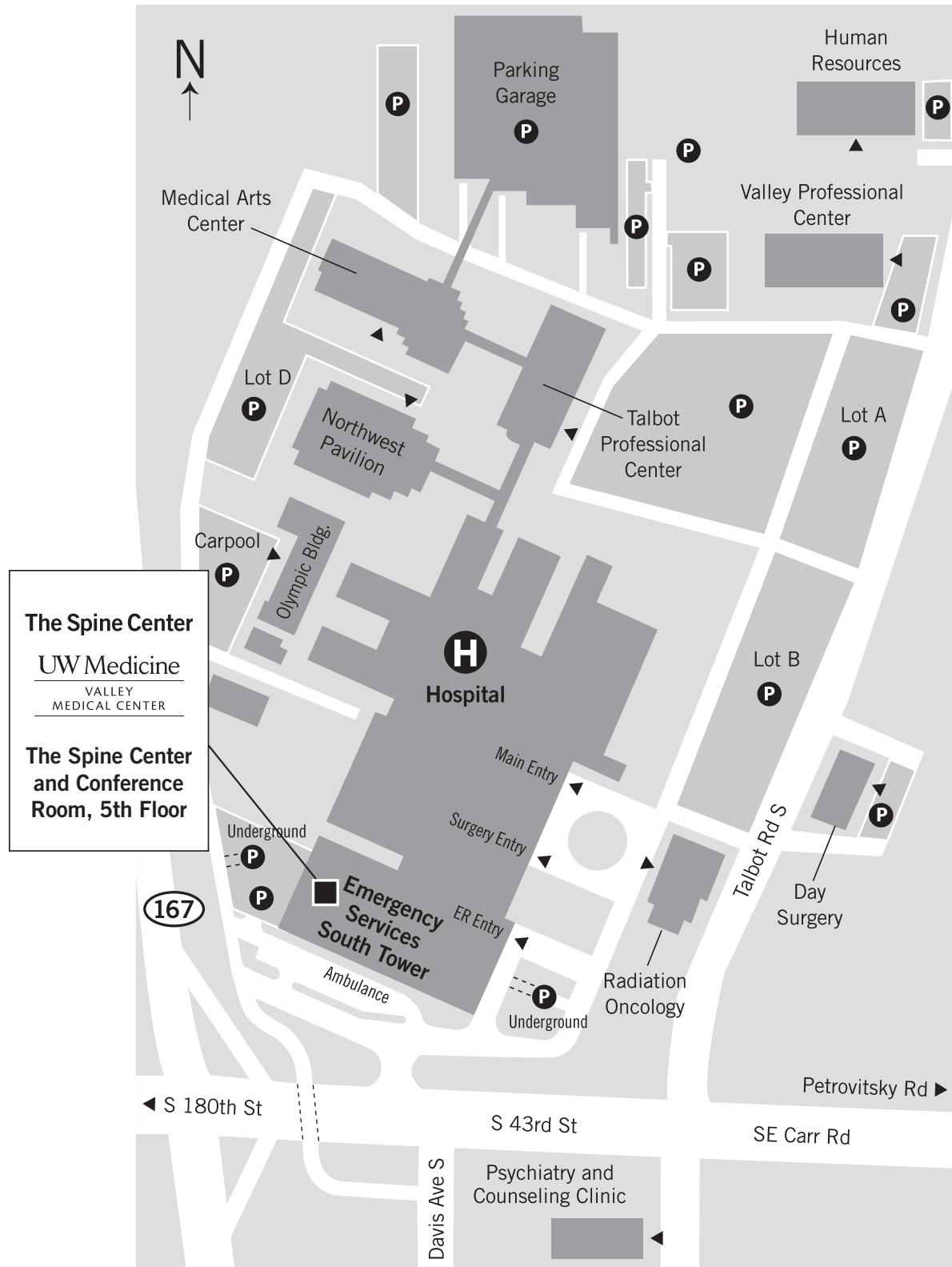
_____.

This appointment will take place at:

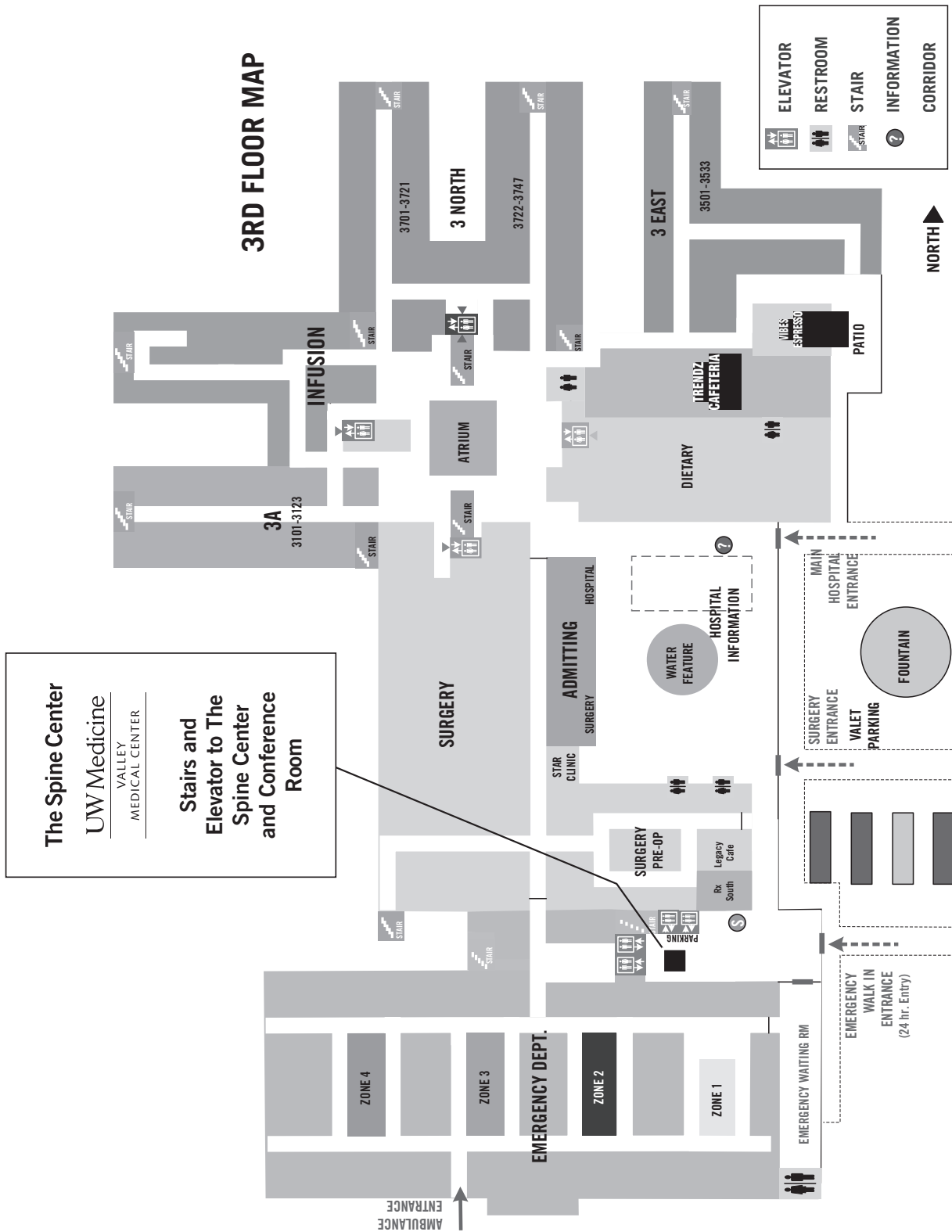
Neuroscience Institute
Valley Medical Center's Medical Arts Center
4033 Talbot Road S, Suite 520
Renton, WA 98055
425.917.6209

About Valley Medical Center

VMC Main Campus Map

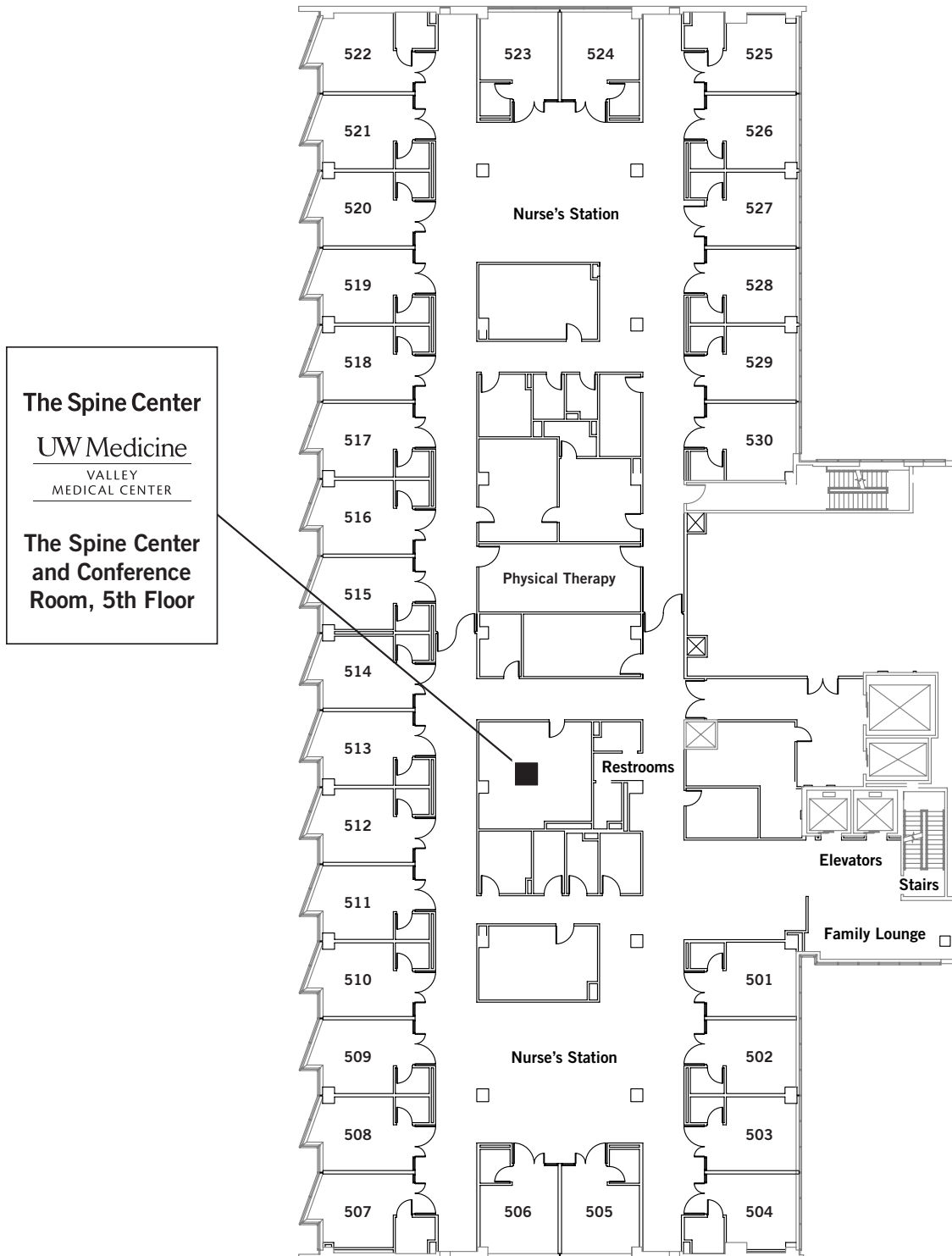


VMC Third Floor Map



VMC South Tower, Fifth Floor Map

The Spine Center



Hospital Services at a Glance

During Your Hospital Stay

Visiting Hours Visiting hours are flexible to accommodate family and friends. Visitors should consult with the patient's nurse regarding appropriate times and length of stay. Visitors are asked to be respectful of noise levels in consideration of other patients. In general, patients should have no more than two visitors at a time, and an adult must accompany children at all times.

Visitation guidelines vary throughout the hospital, especially in Critical Care, Pediatrics and The Birth Center. Please consult with your nurse for additional information.

Room Service All patient meals are ordered using the menu provided in the hospital room and calling room service. Each meal is delivered to the patient's room. Guests and family members are not provided food; however, meal vouchers may be purchased at the Trendz Café. Room service is available 7 AM to 7 PM.

Trendz Café The hospital cafeteria is located on the third floor and is open every day, 6:30 AM – 8:30 PM, and 1 – 2:30 AM. Café hours are subject to change; current hours are posted outside of the cafeteria.

Espresso Bars Legacy Espresso is located in the corridor between the South Tower and Main Lobby. Vibes Espresso Bar is located on the third floor next to Trendz Café. Current hours are posted.

Gift Shop The Present Place, which includes a flower shop, is open 7 days a week. The flower shop is open Monday through Friday. It is located at the main entrance of the hospital.

Vending Machines A vending machine is located in the Legacy Espresso Bar. Multiple vending machines are on the second floor, located near the atrium.

Cash Machine A cash machine is located in the third floor lobby, near Trendz Café.

Public Restrooms Restrooms are located on the third floor outside of Trendz Café. They are also located on the second floor between the main lobby and Radiology. South Tower restrooms are located in Emergency Services and at The Joint and Spine Center on the fifth floor.

Internet All patient rooms have Internet access through the Valley Medical Center wireless guest network.

Mailbox A U.S. Post Office mailbox is located just outside the hospital's third floor main entrance.

Healing Garden Located between the Northwest Pavilion and the Talbot Professional Center, this garden serves as a quiet space for meditation and reflection. The garden is open for patients, staff, visitors and the community. Commemorative bricks and other items are available for purchase and placement in the garden. Please call 425.656.5318 for more information.

Prayer Reflection Room / Chapel A spacious, quiet room is located on the hospital's second floor, facing the fountain. It is available 24 hours a day to patients and visitors. For Spiritual Care Services, call ext 5859.

Pharmacy The Prescription Pad pharmacy has two locations. PP South is located in the corridor between the South Tower and Main Lobby. Prescriptions filled prior to discharge may be picked up at PP South. Open daily 8 AM – 2 AM. PP North is at the north end of the campus at 3915 Talbot Rd S. and features a drive-through window. Open Monday – Friday, 8 AM – 6 PM.

Interpreter Services If needed, an interpreter will be provided during your stay at Valley Medical Center.

Financial Advocate If you do not have health insurance and need to make financial arrangements for surgery, please call 425.656.5599.

Patient Accounts If you have questions regarding insurance or your hospital bill, please call 425.251.5178.

Domestic Violence Information Your nurse or doctor can refer you to community resources. You may also call the Washington State Coalition Against Domestic Violence at 1.800.562.6025.

Specialty Services

The Breast Center Comprehensive breast health services are available on VMC's main campus. The DEXAScan bone-density test is also offered for the detection and prevention of osteoporosis. Please call 425.656.5588 or visit valleymed.org/breastcenter.

Cancer Services Combining the latest technology and protocols with personalized care and understanding, our expert clinicians are fighting cancer with a comprehensive array of services, including early detection, high risk screening and genetic testing, diagnostic testing, surgery, chemotherapy, radiation therapy, support groups, nutritional information and other patient education. Please call 425.656.4002 or visit valleymed.org/life.

Ear, Nose and Throat Clinic The otolaryngologists at the Ear, Nose and Throat Clinic diagnose and manage diseases of the sinuses, larynx (voice box), oral cavity, upper mouth and throat, as well as structures of the neck and face in both pediatric and adult patients. Please call 206.575.2602 or visit valleymed.org/ENT.

The Eye Clinic Dedicated to maintaining and improving eye health, The Eye Clinic offers services ranging from comprehensive eye exams and medical procedures, to specialized care for problems relating to a variety of health conditions. Please call 425.656.5345 or visit valleymed.org/eye.

Lifestyle Medicine & Fitness Center The Lifestyle Medicine & Fitness Center features fitness center memberships, physical therapy and sports rehabilitation, prescribed fitness programs, medical nutrition therapy and Healthy Foundations/Pre-surgical Optimization Program: 16-week lifestyle modification programs including physical therapy, fitness, nutrition and education. Aqua aerobics and pool therapy are also available. Please call 425.656.4006 or visit valleymed.org/fitness.

Neuroscience Institute Offering care for both adult and pediatric patients, the NI's team of providers treat neurological disorders including stroke, pain, headache, epilepsy, tremor, sleep disorders, Alzheimer's disease, Parkinson's disease, multiple sclerosis, brain and spinal cord injuries and amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease). The NI provides specialists in neuro oncology, neurosurgery, neuropsychology, imaging and rehabilitation services. Please call 425.656.5566 or visit valleymed.org/neuro.

Nutrition & Diabetes Clinic Experienced Registered Dietitians provide information about which foods can help you lead a healthier life and most importantly, help you create a plan of action to help reach your health goals. Nutrition counseling is provided for many conditions, including diabetes, prediabetes, gestational diabetes, weight management, metabolic syndrome, high cholesterol, hypertension, polycystic ovarian syndrome, child and adolescent nutrition, gluten intolerance and other conditions as needed. The clinic offers a series of classes covering the essentials of diabetes management for healthy living. Please call 425.656.5377 or visit valleymed.org/diabetes.

Rehabilitation Services The department provides rehabilitation medicine and inpatient and outpatient physical therapy and occupational therapy. Other services include hand therapy, speech and language therapy, children's therapy, stroke rehabilitation and vestibular rehabilitation. Please call 425.251.5165 or visit valleymed.org/rehab.

Valley Women's Healthcare Clinic At Valley Women's Healthcare, our highly-skilled obstetricians and gynecologists (OB/GYNs) specialize in the healthcare needs of women in every phase of life—from adolescence, through childbearing years, menopause and beyond. Please call 253.939.9654 or visit valleymed.org/obgyn.

The Sleep Center Accredited by the American Academy of Sleep Medicine, the center specializes in the diagnosis and treatment of nearly 85 recognized sleep disorders, including snoring and sleep apnea. Please call 425.656.5340 or visit valleymed.org/sleep.

The Stroke Center In addition to the American Heart and Stroke Association's Get With The Guidelines Gold Plus Quality Achievement Award, VMC has earned the association's Target: Stroke Honor Roll Elite Plus for improving stroke care, the association's highest distinction. The goal of The Stroke Center is to provide acute care, rehabilitation and education for both patients and families. Please call 425.656.5566 or visit valleymed.org/stroke.

Before Your Spine Surgery

Preparing for Spinal Surgery: Important Information about Your Home

We want to ensure your safe recovery when you return home. To prevent problems, consider the following questions before your spinal procedure:

1. Where do you live (apartment, house, condominium, townhome)?
2. Do you live alone or are there other members in the household?
3. Who will drive you home from the hospital?
4. If you live alone, do you have family, friends or neighbors nearby? Can they offer assistance should you need it?
5. Do you have any adaptive equipment, such as a walker, crutches or cane, commode, high-rise toilet seat, shower bench or other similar equipment?
6. Do you have throw rugs or carpeting in your home? If so, where?
7. Do you cook your meals at home?
8. Is someone available to help prepare meals after surgery?
9. Do you have children? If so, is someone available to help with care and transportation of your children?
10. Are your bills settled and finances in order?
11. If you need to be discharged to a skilled nursing facility or rehabilitation center after surgery, do you have a preferred location?
12. Do you have a phone near your bed and seating areas?
13. Do you have pets? If so, have you arranged for the care of your pets?
14. What pharmacy will you use after surgery? Is someone available to assist you in picking up medications?

Preparing Your Home for Your Return from Surgery

Remove Hazards

- Remove area or throw rugs and any loose carpeting.
- Remove loose cords and other clutter that may cause accidents or falls.

Use Assistive Devices

Need for assistive devices vary according to the individual. We will review your requirements before you are discharged from Valley Medical Center. You may need the following:

- Elevated toilet seat or commode
- A sturdy handrail for multiple steps
- Cordless telephone
- Remote control for television
- A grabber to reach small items
- A walker or cane
- Shower seat and handheld shower

Create a Less Cluttered Environment

- Reorganize furniture to allow space for a walker.
- Move important items to top drawers of dressers; lower the shelves of high cabinets; and move needed items to other easily accessible areas.
- Use paper plates and other disposable items to decrease clean-up time.
- Leave frequently used items within easy reach to decrease bending and reaching.

Stock Up on Essential Items

- Ample reserves of easy-to-prepare food, individually packaged convenience foods and frozen dinners and casseroles
- Toilet paper
- Tooth paste
- Paper towels
- Paper plates and napkins
- Small trash bags, as initially, large trash bags may be more difficult for you to move

When You Are Scheduled for Surgery

Valley Medical Center's pre-registration staff will call you to obtain the following information:

- Full legal name
- Mailing address and phone number
- Email address
- Employment information
- Emergency contact information
- Insurance information, including ID numbers and a claim address

If you have not been contacted by the pre-registration staff 7 business days prior to your scheduled procedure, please call the Pre-registration Office at 425.251.5193.

In addition to obtaining the above information, the Pre-registration Office will also schedule you to see a preoperative liaison nurse at Valley Medical Center's STAR (surgical testing and registration) Clinic. Please bring this booklet and any paperwork you have received to your appointment at the STAR Clinic. If you have received medical clearance for your spine surgery from your primary care physician, a pre-registration interview can be performed by telephone and you will not need an appointment at the STAR Clinic.

Your Visit at the STAR Clinic

At the STAR Clinic, the preoperative liaison nurse will interview you and perform a basic physical exam. Your visit with the preoperative nurse will last about an hour. During this visit, please provide a list of all medications you take and their dosages. The list should include both prescription, over-the-counter medications and herbal medications. The nurse will arrange for an electrocardiogram (EKG) and chest x-ray, if necessary, or any lab test(s) required for your surgery. The nurse will discuss your role in your care, both before and after the surgery, and provide information about advance medical directives. If you have a living will or health care power of attorney, please bring a copy of your legal documents to the hospital upon admission. The STAR Clinic is located in the main lobby of Valley Medical Center.

Spine Center Patient Education Seminar

If you are a lumbar fusion patient, you will need to attend a patient education seminar in addition to your visit with the preoperative nurse. The purpose of this seminar is to provide the education and information needed for a smooth transition from the hospital to your home. Topics include tips on preparing for time at the hospital; discharge planning; preparing your home for your arrival after surgery; and what to expect afterward. Family members or other caregivers helping you are encouraged to attend. The seminar typically lasts about an hour. For more information or to RSVP for an upcoming seminar, call the The Spine Center at 425.656.4636.

What You Need to Know to Prepare for Surgery

- You must stop anti-inflammatory medications 5 days before surgery. You can find a list of these medications on page 30 of this booklet.
- Stop aspirin 5 days before surgery.
- Do not eat or drink anything (including water) after midnight the night before your surgery, unless directed otherwise by your surgeon. Your physician may refer to this requirement as “NPO,” which means nothing by mouth.
- If you are currently taking prescription drugs for conditions such as high blood pressure, seizures, heart problems or asthma, take them before surgery as you normally would, but with the smallest amount of water possible. Be sure to discuss medications with your doctor.
- If you have diabetes and require insulin, be sure to check with your doctor regarding your insulin requirement before surgery.
- Do not wear contact lenses, jewelry, makeup, skin lotions, powders or perfumes the day of the surgery.
- The day of your surgery, a nurse will fill out a preoperative checklist. If you wear dentures, eyeglasses, contact lenses, a hearing aid or jewelry, you will be asked to remove them for safekeeping.
- Please be aware that your scheduled surgery time is only an estimate. Although every attempt will be made to keep your surgery on schedule, your actual surgery time will depend on the amount of time required for cases before yours and the need to prioritize emergency surgeries.
- It is important we be able to contact you prior to your surgery to notify you of any possible schedule changes. If you cannot be reached at your home phone, please call the Surgery Center at 425.251.5192 to provide your daytime phone number.
- You will be asked to sign Consent to Care and Financial Responsibility forms.
- Consider taking a shower the morning of your surgery using antibacterial soap.
- **If you are going to have a cervical or lumbar fusion, you must quit smoking and stop any nicotine products before surgery. You must remain nicotine-free for a minimum of 3 months after surgery. Your surgeon may choose to perform a urine-nicotine screening test to verify that you have quit nicotine products.**

Financial Arrangements for Surgery

If you don't have health insurance coverage, you will need to make financial arrangements prior to your procedure. The Financial Counselor at Valley Medical Center is available to assist you with this process. You may contact the Financial Counselor at 425.656.5599.

If you have health insurance coverage, Valley Medical Center will bill your insurance company for services provided at the hospital. Any services provided by a physician (surgeon, anesthesiologist, pathologist and/or radiologist) will be billed separately by the physician's billing office. You may receive informational statements while your insurance company processes your claim. If your insurance requires more information to process your claim, you may also receive a letter from Valley Medical Center. If you have any questions or concerns regarding statements or bills received, please call Valley Medical Center Patient Accounts at 425.251.5178.

Your Discharge from Valley Medical Center

The discharge planning process begins when you are admitted for surgery, although your personal discharge plan should begin even earlier. On the day you return home from the hospital, you will leave about 10 AM. Plan to have someone drive you home from the hospital and to your first few appointments after surgery. Depending on your insurance coverage, you may be eligible for home nursing visits, home therapy and other patient services. If you need assistance making arrangements for help at home or a place to stay, please tell your nurse as soon as possible. Your nurse will give you written instructions regarding caring for yourself at home and will answer any questions about your discharge. You may also receive a visit from a hospital discharge planner before you leave the hospital.

Notice of Privacy Practices

Valley Medical Center's Notice of Privacy Practices describes how medical information about you may be used and disclosed and how you can access this information. You will receive a complete copy of the Notice of Privacy Practices when you are admitted to Valley Medical Center.

The Notice of Privacy Practices is provided to you as a requirement of the Health Insurance Portability and Accountability Act (HIPAA). It describes the limits to which we may use or disclose your protected health information, with whom that information may be shared and the safeguards we have in place to protect your information. This notice also describes your rights to access and amend your protected health information. You have the right to approve or refuse the release of specific information outside of our system, unless the release is required or authorized by law or regulation. For further clarification of our Notice of Privacy Practices, you may e-mail comply@uw.edu or call 206.543.3098.

List of Anti-inflammatory Medications

Stop these medications 5 days before surgery:

- Advil
- Aleve
- Arthrotec
- Aspirin
- Cataflam
- Daypro
- Diclofenac
- Etodolac
- Feldene
- Ibuprofen
- Indomethacin
- Ketorolac
- Ketoprofen
- Lodine
- Meloxicam
- Mobic
- Motrin
- Nabumetone
- Naproxen
- Naprosyn
- Piroxicam
- Relafen
- Toradol
- Voltaren

Other Medications

- If you take Coumadin, contact your primary provider to stop your Coumadin prior to surgery.
- Stop taking Plavix 7 days before surgery.

Stop these herbal supplements 5 days before surgery:

- Fish oil
- Flaxseed oil
- Garlic
- Ginseng
- Glucosamine-chondroitin
- Green tea extract
- Many other herbal supplements

If you are unsure if your herbal supplement contains an anti-inflammatory or anti-platelet product, please contact your pharmacist.

If you are having a spinal fusion performed on your neck or back, these medications must be stopped for 3 months after surgery.

Potential Risks Associated with Spine Surgery

Although spine surgery generally has a low complication rate, as with any surgical procedure there are potential risks. Below are the most common risks, along with the precautions you can take to help reduce them.

Infection

With any surgery, there is a risk of infection. However, pre-admission test results will detect whether you have any active infections before surgery and antibiotics will be administered to you before and after surgery to help prevent infection. Please consider taking a shower using antibacterial soap the morning of your surgery.

Blood Clots

Circulation may be impaired during the healing process from spine surgery. Blood clots can develop and cause a deep vein thrombosis, heart attack, stroke or pulmonary embolus. To promote circulation, you may be asked to move your feet and exercise your ankles. Compression devices may also be applied to your calves to help prevent a blood clot.

Pneumonia

Congestion in the lungs may occur following surgery which can lead to pneumonia. To prevent pneumonia after surgery, you will be asked to use an incentive spirometer or take several deep breaths. These breathing exercises will help keep fluids from pooling in your lungs. Breathing deeply after surgery and using an incentive spirometer are important measures to prevent congestion in the lungs. It is also important to get out of bed often.

Bladder Infections

Bladder infections may also occur, especially if you have a catheter. It is important to drink plenty of fluids to prevent infection. We will remove the catheter as soon as possible.

Nerve Damage

Nerve damage can occur during spine surgery and can be present after surgery. Nerve damage can include complete paralysis, numbness, extremity weakness, bowel and bladder dysfunction or pain. These symptoms can be temporary or permanent. If you are having surgery on your neck, nerve damage can result in a change in your voice quality or ability to swallow.

Blood Loss

Large amounts of unexpected blood loss can occur. Significant blood loss may require a blood transfusion. Blood transfusions have a small risk of transmitting undetected HIV, hepatitis B and hepatitis C or cause an allergic reaction. Blood transfusions are only ordered when medically necessary. You may also be asked before surgery to donate your own blood. For some procedures, a cell saver is used which allows your own blood to be transfused back to you. If you are anemic at discharge, you may be given an iron supplement.

Blindness

When performing lumbar spine surgery, you are positioned with your face down. Extra pressure or extra fluid can cause temporary or permanent visual changes.

Pain

Spine surgery typically reduces pain, but it may not eliminate your pain entirely. Initially after surgery, you will experience an increase in pain.

Failure to Fuse

If your bone does not completely heal after a fusion surgery, you may experience pain. If you smoke or use any nicotine products before or after your surgery, you increase the risk of the bone not healing. Failure to fuse may require additional surgery.

Severe Complications

As with any surgery, there is the possibility of complications from the procedure and from anesthesia. Very rarely, complications may be severe enough to result in death.

Your Guide to Surgery

The Morning of Your Surgery

If possible, please leave valuables including watches, jewelry and credit cards at home. You may wish to bring a calling card for long-distance phone calls, a comfortable bathrobe, slippers, pajamas and personal toiletries, along with a change of loose-fitting clothes to wear home when you are discharged from the hospital. You may also want to bring a small amount of cash for any incidentals. Bring your home medications to the hospital in their original containers so an accurate medication list can be created.

Your surgeon's office staff will tell you in advance what time to arrive at the hospital. Please check in at the Surgery Center admitting area. Your driver may drop you off at the Surgery entrance, the door south of the main hospital entry.

Drivers may park in the South Tower Garage by turning right at the end of the surgery entry drop off roundabout into the underground garage. Ample, free parking is also available in the lots surrounding the hospital and the North Garage. The South Tower garage is the most convenient to the Surgery Center.

While garage and lot parking at Valley Medical Center is free, the South Tower Garage requires your ticket be validated at the security desk next to the Emergency Department before leaving. Valet parking is available for a nominal fee.

You may be given medication before surgery which may make you sleepy and cause your mouth to feel dry. Relax and remain in bed with the rails up. Please call your nurse if you need anything to feel more comfortable.

In the Operating Room

Your surgery team will typically include your surgeon, surgical assistant, anesthesiologist, nurse anesthetist, operating room nurse and surgical technicians. The team will work with you to make sure everything goes as smoothly as possible.

You will have an intravenous line (IV) started before surgery. The IV is inserted into the vein of your hand or forearm. Any fluids or medications you need during surgery are given to you through the IV. The operating room is kept cool and can be bright and noisy due to the various equipment used during your surgery. Members of your surgical team will be with you at all times to ensure your comfort and safety until the end of your surgery. If you feel chilled before surgery, please ask for a warmed blanket. We want you to be as comfortable as possible.

Anesthesia

You will receive general anesthesia. Your anesthesiologist will review your chart and determine the appropriate anesthesia medication for your situation.

General anesthesia is typically given by adding medications to your IV and by having you breathe a mixture of anesthetic gases. You will be aided in breathing during the surgery.

Your heart rate, blood pressure, oxygen concentration and breathing will be monitored closely throughout your operation.

In the Recovery Room

After surgery, you will be taken to the PACU (Post Anesthesia Care Unit) or recovery room. A PACU nurse will care for you as your anesthesia wears off by monitoring your condition and checking your dressing, blood pressure, IV, Foley catheter and any drainage tubes inserted near your incision.

- **Foley catheter:** While you are undergoing anesthesia, a Foley catheter may be inserted into your bladder to drain your urine. If this is used, it will remain in place for 1 to 2 days.
- **Drainage tube:** A drainage tube may also be in place for 1 to 2 days to capture blood draining from your surgery site.
- **Oxygen:** You may also receive oxygen through a nasal cannula or oxygen mask. This is typically precautionary: it does not mean you are having difficulty breathing or that there is a problem of any kind.

You may experience a variety of symptoms as your anesthesia wears off, including blurry vision, dry mouth, nausea, chills and perhaps some pain. Do not hesitate to ask your nurse for medication to control your pain.

Your anesthesiologist will determine when you can be moved to your room at The Spine Center, generally within 1 to 3 hours after surgery. Your surgeon will discuss the procedure with your family in the waiting area or on the telephone.

Beginning the Recovery Process

Vital Signs

Once you are transferred from PACU/recovery room to your room at The Spine Center, nurses will continue to closely monitor your vital signs, including your blood pressure, heart rate and temperature. A monitoring machine may be used.

Nausea Management

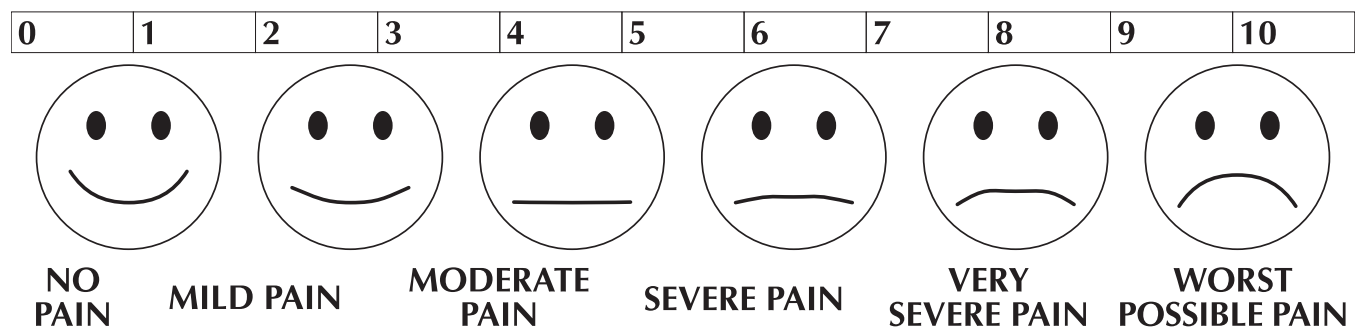
Sometimes people are nauseated when they wake up from surgery. If this happens, turn your head to one side and call your nurse to assist you.

Coughing

Coughing after many surgical procedures is essential to clear your lungs. Your nurse will review proper coughing techniques with you.

Pain Management

Unfortunately, some pain after surgery is unavoidable. Medication to ease the pain can be administered in pill form, by injection or through your IV. It is important to tell a member of your care team if your pain is worsening before it becomes unbearable. You can report your pain to your care team using the scale below. Rate your pain with “0” for no pain and “10” for the worst pain. This will help your care team know if your medication is working.



Arriving at the Spine Center from the Recovery Room

Education

The nurses will explain any equipment used and what you can expect to happen throughout the day.

Diet

With the guidance of your nurses and as you are able to tolerate solid foods, you will progress to a regular diet. Use the menus provided in the hospital room to order your meals.

Using the Bathroom

Your nurse will help you use a bedpan, urinal or assist you to the bathroom. Alternatively, your Foley catheter may still be in place. Foley catheters are typically removed the first morning after surgery.

Lab Work

Blood may be drawn for the purpose of measuring laboratory values.

Breathing Exercises

The nurses will teach you breathing exercises and remind you to take deep breaths and cough every 2 hours. You may be instructed to use an incentive spirometer, which measures how deeply you are able to breathe. Your family or other caregiver is encouraged to help. You may have oxygen in place until you are fully awake following surgery. Breathing exercises are an important tool to prevent pneumonia while you are recovering from surgery.

Length of Stay

The length of your hospital stay will vary depending on the procedure performed. Your surgeon will give you an approximate length of your hospital stay.

Drains

Typically, drains are removed 24 to 48 hours after surgery. If a cervical fusion was performed, the drain is removed the first morning after surgery.

Physical and Occupational Therapy

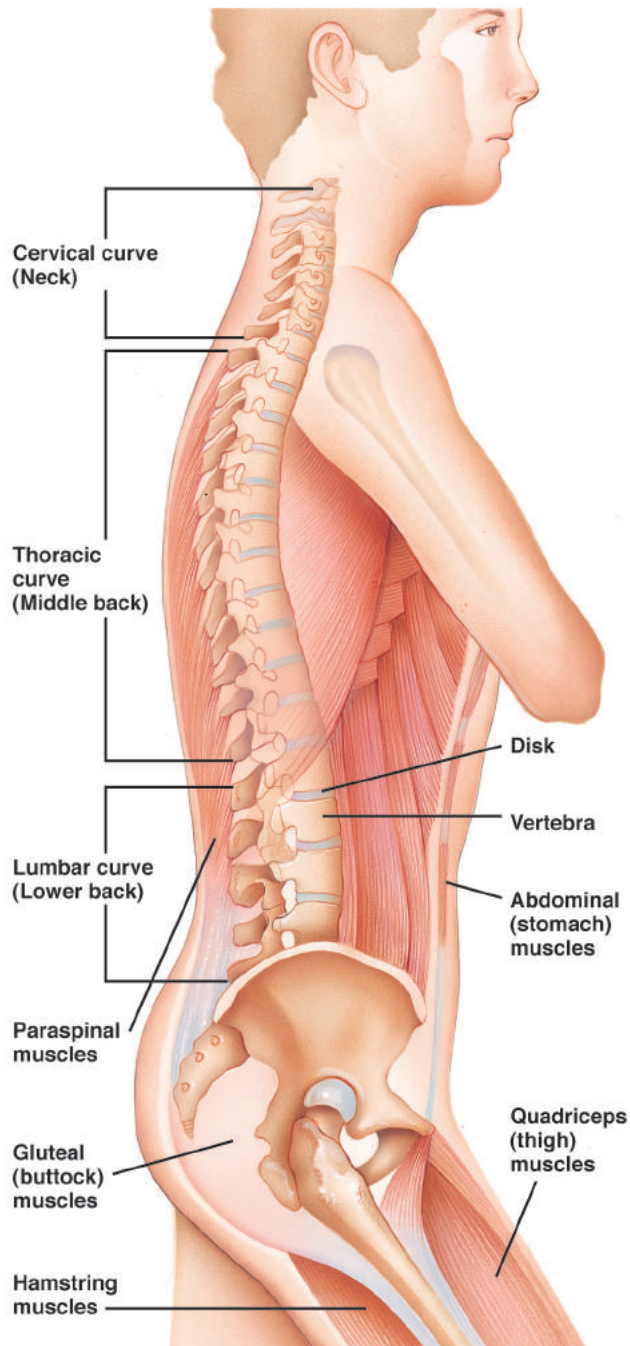
You will be out of bed within the first 24 hours after your surgery. You may be seen by both a physical and occupational therapist. They will assist you in increasing your independence while walking. If you have stairs at your home, they will assist you in climbing stairs before your discharge.

Discharge Planning

The nurses and therapists will confirm your discharge and home-care plans and will discuss any additional arrangements you may need. A nurse will give you your discharge medication prescription as provided by your surgeon or physician assistant. You may go home when you have met your goals for independence.

Anatomy & Surgery Descriptions

Learn About Your Spine

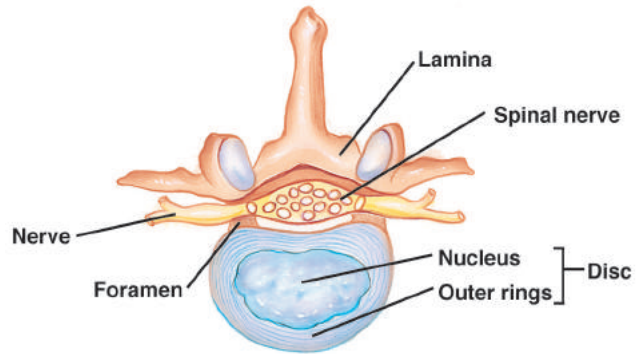
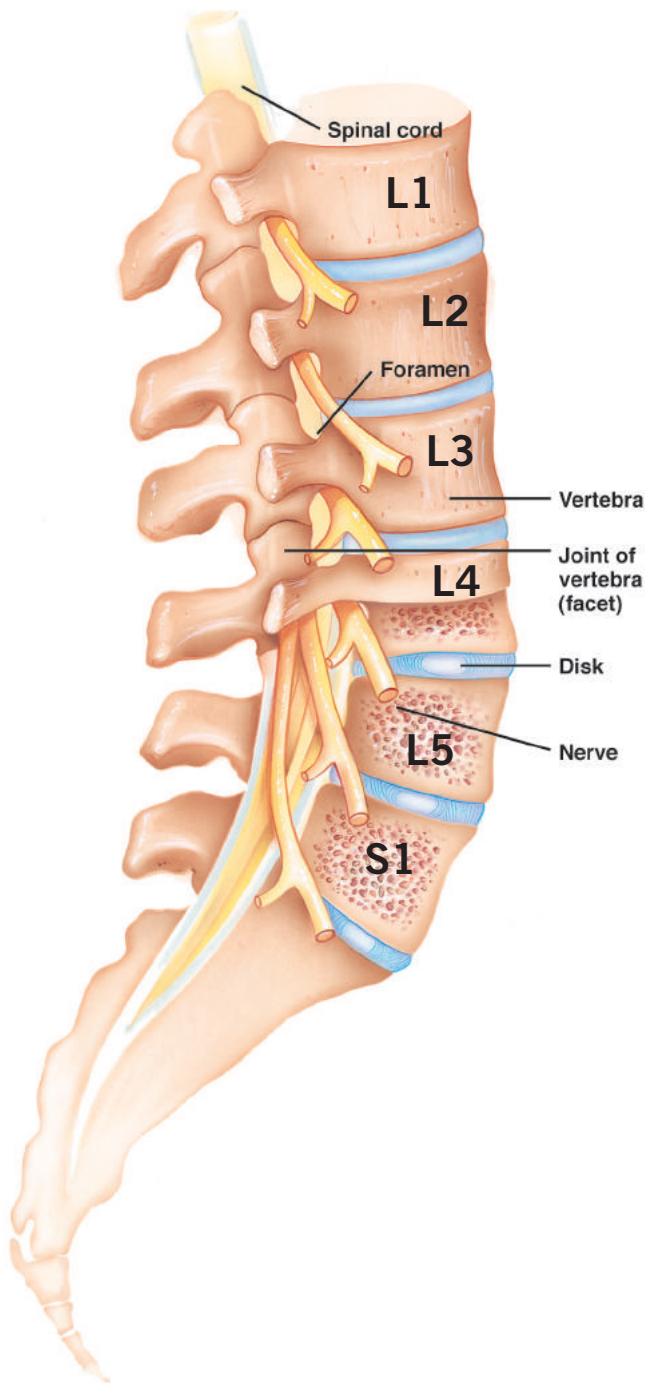


The Curves of Your Spine

The spine consists of 24 bones (vertebrae) with discs between the bones that act as cushions and absorb shock.

The bones are aligned in such a way that three curves are created. The curves and the characteristics of the bones define the cervical, thoracic and lumbar spine as seen on the diagram.

Lumbar Spine Anatomy



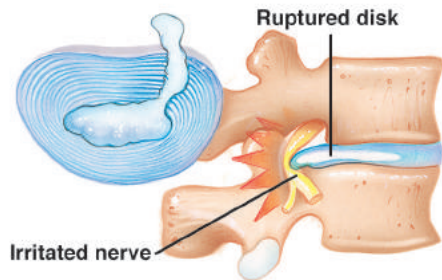
The lumbar spine is made of five vertebra with discs between each level. The vertebra are numbered L (lumbar) 1 through 5. The disc is named from the vertebra located above and below the disc.

So, for example, a L4-L5 discectomy is surgery at the disc that sits between the fourth and fifth lumbar vertebra.

The spinal cord travels through the spinal canal within the vertebra.

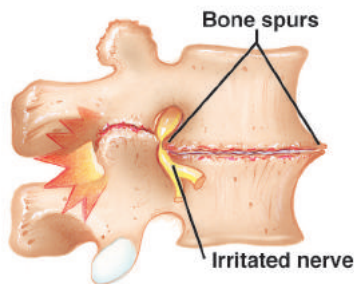
At each level, nerves travel out of the foramen on each side and down into the legs. Spinal problems commonly cause patients to experience leg pain, weakness or numbness due to nerve irritation.

Lumbar Spine Problems



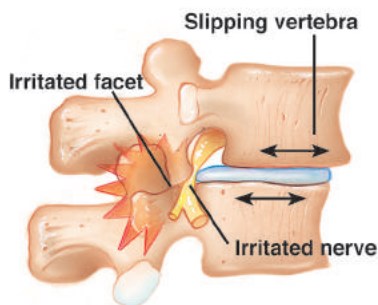
Bulging or Herniated Disc

The disc is made of a thick outer ring that encircles a soft jelly-like substance. Pressure may cause the outer ring to tear or rupture and the soft disc material may bulge or herniate into the space that the nerve occupies.



Arthritis or Stenosis

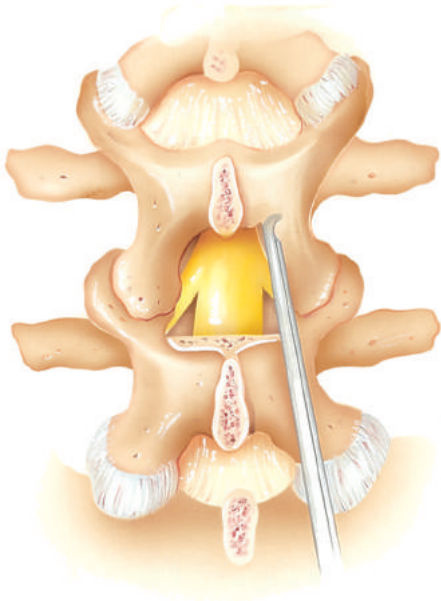
As disc material degenerates, it causes the joints between the vertebra to become arthritic and enlarged. It may also cause bone spurs to develop on the edge of the vertebra. Under both situations, the canal can become narrowed and the nerve can become irritated.



Instability or Spondylolisthesis

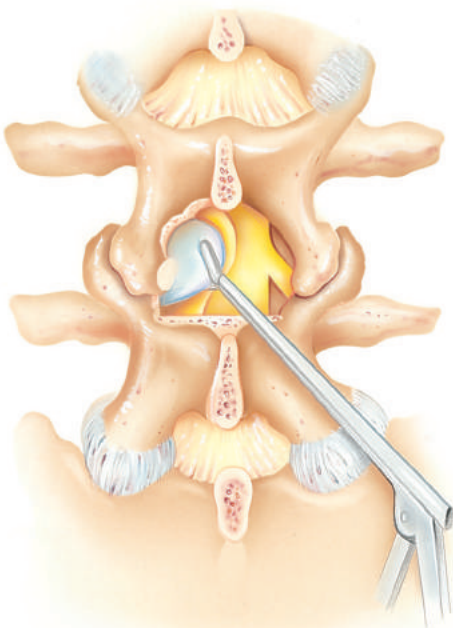
Vertebra can be unstable due to malformation of the vertebra as the spine develops. Instability can also occur with age as arthritis develops. Slipping of the vertebra can cause back pain and irritation of the nerve can cause leg discomfort.

Lumbar Spine Surgery



Laminotomy/Laminectomy

A laminotomy is the partial removal of the lamina to create a small space in order to access the disc. A laminectomy is the removal of the entire lamina. By removing the lamina, pressure is relieved as more space is made available for the nerves to occupy.

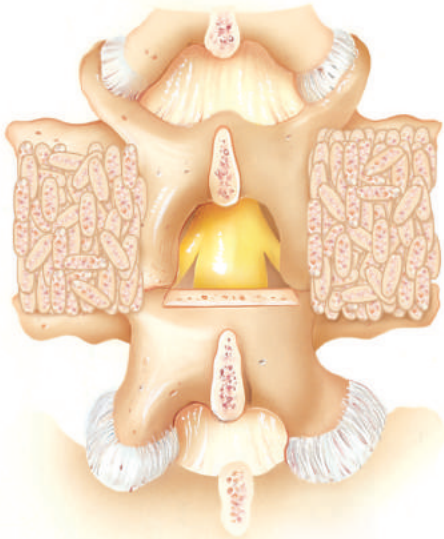


Discectomy

When a disc herniation is causing nerve irritation, a patient may choose to undergo a discectomy procedure.

To remove the disc herniation, a small window is created by removing a small piece of the lamina. The herniated disc material is then removed. Typically, a microscope is used to help visualize the nerve and disc material.

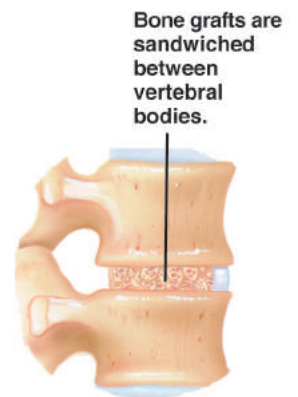
Lumbar Spine Surgery (continued)



Fusion

When two bones heal together as one piece of bone, they are said to have fused. To surgically create a fusion of two bones, the bones are stabilized, typically using metal rods and screws. Bone graft material is then laid along the metal to promote the bone to heal itself as one piece. In addition to bone forming along the metal, often fusion is also between the vertebral bodies (interbody fusion).

Bone for grafting can be obtained from the removal of bone from the surgical site or from cadaver bone. In some circumstances, bone is harvested from the iliac crest of your pelvis to use as bone graft. If this procedure is recommended for you, your surgeon will specifically discuss the bone graft with you before surgery.



Lumbar Spine Surgery (continued)



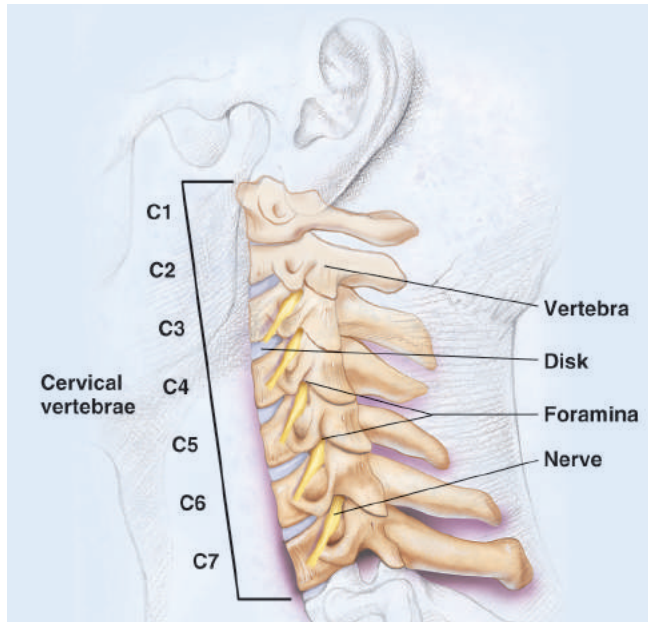
Lumbar Disc Replacement

Total lumbar disc replacement is used to treat degenerative disc disease (DDD) at one level from L3 to S1. Total lumbar disc replacement surgery is intended to remove the diseased disc; restore the disc to normal height; reduce pain associated with the diseased disc; provide the potential to preserve motion in the affected vertebral segment.

Disc replacement surgery is performed by making a small incision below the belly button. The disc is removed and a metal implant is placed between the vertebral bodies.



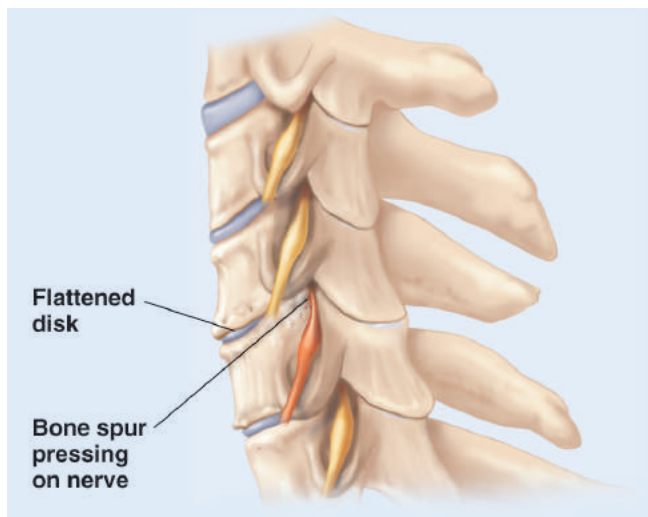
Cervical Spine Anatomy



Cervical Spine Anatomy

The cervical spine is made of seven bones (vertebra) with discs between each level. The bones are numbered C (cervical) 1 through 7. The disc is named from the vertebra level above and below the disc. For example, a C5-C6 discectomy would be the removal of the disc between the vertebral bodies of C5 and C6. The spinal cord travels down the canal created by the vertebra. The nerves branch off the spinal cord and follow specific paths down into the arms.

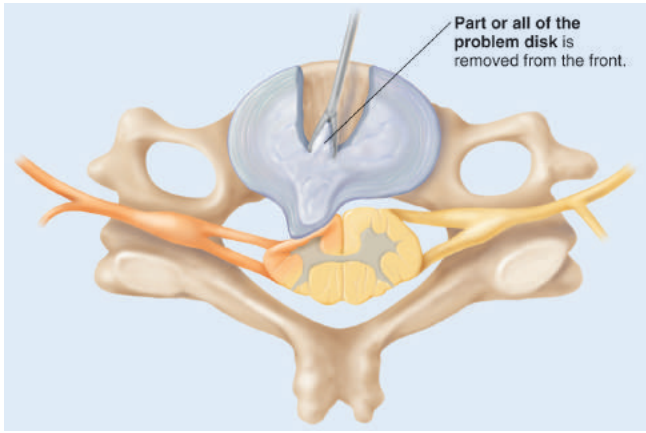
Cervical Spine Problems



Disc Degeneration and Arthritis

As discs lose height over time and degenerate, the opening for the nerves to travel from the spinal cord to the arms can become smaller. As the disc ages further, bone spurs can develop causing more irritation to the nerve.

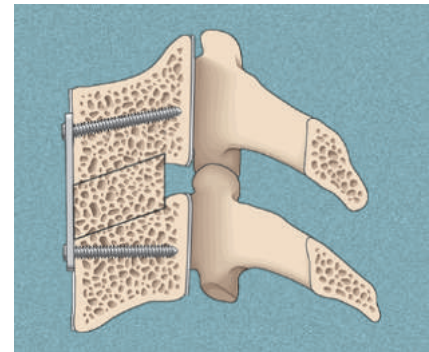
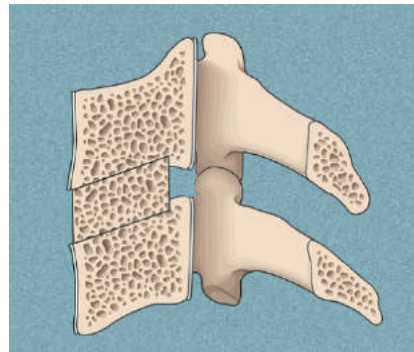
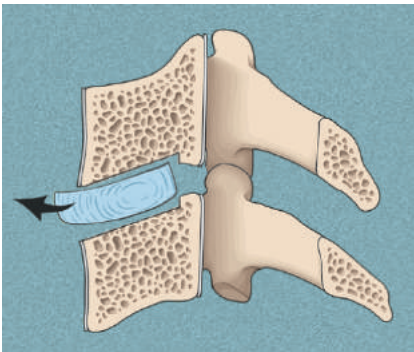
Cervical Spine Problems (continued)



Disc Herniation

Pressure can cause the thick outer ring of the disc to bulge or rupture. As this occurs, the jelly-like inner disc material can become herniated. The herniated disc can contact the nerve and cause pain, numbness and/or weakness in the arms and hands.

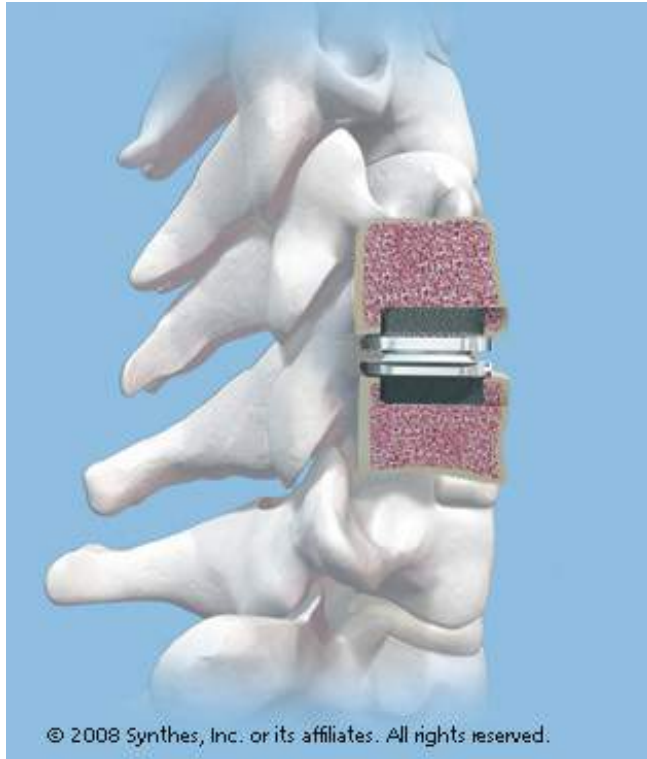
Cervical Spine Surgery



Anterior Cervical Discectomy and Fusion

The most common procedure performed for cervical disc problems is an anterior cervical discectomy and fusion (ACDF). The spine is accessed by making an incision in the front of the neck along a skin fold. Instruments are used to expose the spine. The disc is removed from between the vertebral bodies and a bone graft or cage is inserted into the disc space. A metal plate with screws is then placed to stabilize the spine and allow two vertebral bodies to fuse together. The levels that are fused together correspond to the vertebra number. For example, a C5-C6 ACDF is an anterior fusion between the cervical 5 and cervical 6 vertebral bodies and is considered a one-level fusion. Typically, the ability to move your neck after a one-level fusion is not substantially changed after surgery.

Cervical Spine Surgery (continued)



Cervical Disc Replacement

In particular situations, disc herniations may also be treated with a cervical disc replacement. The disc replacement allows motion to be maintained and reduces the risk of disc degeneration above and below the herniated level.

The procedure, hospitalization time and recovery is similar to cervical fusion surgery.



After Your Spine Surgery

Post-Operative Pain

After surgery you will experience many different types of pain. The pain may move to different locations from day to day. Please inform us if you experience any sustained pain associated with weakness that becomes progressively worse over several days. New numbness is also very common after surgery and may be due to the position of your body during surgery itself. The numbness will typically improve over several weeks and may become a tingling “pins and needles” sensation before it improves. If you received steroids during the surgery, you may feel the steroids wear off 5 to 7 days after the procedure.

During this time and even up to 2 weeks following surgery, you may feel a significant increase in your pain that can be severe before improving. It is also very common to have difficulty sleeping for several weeks after surgery.

Pain Medication

After surgery, we use several types of pain medications to treat surgical pain. We do not expect your pain to be “0” with the pain medications, but we do want your pain to be tolerable. You will be given prescriptions for medications before your discharge from the hospital. The prescription may include orders for long- and short-acting pain medications. Your discharge medication may include the following:

- **Oxycodone HCL (Oxycontin), Oxycodone ER, Oxycodone SR or MSContin:** These are long-acting pain medications to be taken every 12 hours. Do not increase this medication. If you would like to start decreasing your daily narcotic intake, you may wean yourself from this medication. To do this, decrease your daily dose to 1 tablet a day for 3 to 5 days, then discontinue this medication completely. Oxycontin and MSContin should only be used for 1 to 2 weeks after surgery.
- **Oxycodone/acetaminophen (Percocet):** This is a shorter-acting pain medication which combines a narcotic with Tylenol. It is to be taken every 4 to 6 hours for pain. Because too much Tylenol can potentially injure your liver, do not take more than 8 to 10 per day. When you are ready to decrease your daily dose of Percocet, you may substitute one of your Percocet doses with an over-the-counter Tylenol tablet or stretch out the time between doses.
- **Oxycodone IR:** This is a shorter-acting, narcotic pain medication without Tylenol. This medication is to be used for “breakthrough” pain in between the doses of Percocet. This medication will only be needed the first week after surgery, if needed at all.

- **Lortab/Vicodin/Darvocet (hydrocodone, propoxyphene):** These are all shorter-acting pain medications containing a different narcotic and Tylenol. Because of the added Tylenol, you should not take more than the prescribed amount.
- **Hydroxyzine (Vistaril):** This medication may be added to your pain regimen to improve the strength of your narcotic pain medicine.

If you have had a fusion-type surgery, do not take any anti-inflammatory medication after surgery for 3 months. These medications may inhibit the fusion from healing. Anti-inflammatory medications include:

- | | | | |
|--------------|----------------|--------------|-------------|
| ■ Advil | ■ Etodolac | ■ Ketorolac | ■ Naproxen |
| ■ Arthrotec | ■ Feldene | ■ Meloxicam | ■ Piroxicam |
| ■ Aleve | ■ Ibuprofen | ■ Mobic | ■ Relafen |
| ■ Cataflam | ■ Indomethacin | ■ Motrin | ■ Toradol |
| ■ Daypro | ■ Ketoprofen | ■ Nabumetone | ■ Voltaren |
| ■ Diclofenac | ■ Lodine | ■ Naprosyn | |

Avoid herbal supplements containing anti-inflammatory for 3 months after surgery, including:

- | | | | |
|----------------|-----------|---------------------------|---------------------------------|
| ■ Fish oil | ■ Ginko | ■ Glucosamine-chondroitin | ■ Many other herbal supplements |
| ■ Flaxseed oil | ■ Ginseng | ■ Green tea extract | |
| ■ Garlic | | | |

If you are unsure if your herbal supplement contains an anti-inflammatory, please contact your pharmacist.

Incision Care

After surgery, your incision will be closed with either dissolvable sutures or staples. If you have staples, they will need to be removed 14 days after surgery. We rarely use staples, so you will be told if they have been placed. More likely, you will have a dissolvable stitch. You may have two pieces of sutures coming out from either end of the incision. The incision will be covered with steri-strips (butterfly bandages), which will fall off on their own within the first or second week after surgery. Once the incision is dry, no wound care will be needed. At home, you will not need to keep your incision covered with a dressing unless it has drainage. Contact the clinic if your incision drains yellow or green discharge or if you feel it has opened. It is normal to see bruising or swelling around or below the incision. You may shower the second day after surgery. You may wet the incision and pat it dry with a towel. Do not cut suture ends and do not pull off your steri-strips unless they have started to fall off on their own. We will take care of your incision at your first post-operative visit. Do not take a bath or use a hot tub for 1 month after surgery. Do not apply lotion or ointments to the incision for 1 month after surgery. You may use heat or ice along your back after surgery, but keep in mind your skin sensation in that area may be altered. Please take care to limit your heat and ice application time to avoid injuring your skin.

Diet and Bowel Function

Pain medications commonly cause constipation. In the hospital, you may have required an enema or suppository to assist you with bowel movement. You will be discharged to go home with a stool softener called Colace. If Colace is not enough to assist you in having a bowel movement, Senakot-S, magnesium citrate or a laxative suppository may help and can be purchased over the counter. You only need to take the softener while you are taking narcotic pain medication. If you develop a loosening of your stools, you should discontinue the stool softener.

When you are at home, you should try to eat a balanced diet that includes fruits, vegetables and protein to insure proper healing. If you normally take a multi-vitamin or calcium tablet, you should resume taking the supplement. Many herbal supplements contain an anti-inflammatory, so most herbal medications should not be resumed for 3 months after a fusion-type surgery. You may ask your pharmacist about ingredients of your herbal medications.

Activity after Surgery

After surgery, we want you to walk as much as safely possible. You may need a walker if you had a fusion-type surgery. A physical therapist will determine what type of equipment you may need at home and you will be given a prescription for equipment before discharge from the hospital.

If you had neck surgery, you will need to avoid looking upward or working overhead for the first 2 weeks. Avoid lifting more than 10 pounds the first 2 weeks. You may be given a soft or hard collar to wear. If you are given a soft collar, it is to be worn for comfort only. If you are given a hard white and blue type collar, it needs to be worn at all times when you are out of bed. You may be given specific collar instructions from your surgeon before you are discharged.

Most patients will not need physical therapy immediately after surgery. If the hospital physical therapist decides you need extra therapy at home, it will be arranged prior to your discharge from the hospital.

Once you have stopped using your narcotic pain medication and you feel safe operating a vehicle, you may drive following your surgery. If you have a long road trip scheduled, please plan to take stretching breaks every few hours.

Leg Exercises for Lumbar Spine Surgery

The following exercises will help maintain your leg strength and range of motion and help prevent blood clots after your back surgery. Exercises should not increase pain. If an exercise does increase your pain, you should stop that exercise.

Repeat 10-20 repetitions of each exercise, two to three times daily.

1. Ankle Pumps

- Lie on your back.
- Slowly point your toes up and down, moving your whole foot.
- Slowly move your feet in circles (both directions).



2. Knee Locks (Quad Sets)

- Lie on your back.
- Slowly tighten your thigh muscles by straightening your knee.
- Hold for 5 seconds.
- Relax.



3. Buttocks Squeeze (Gluteal Sets)

- Lie on your back.
- Tighten your buttocks.
- Hold for 5 seconds.
- Relax.



Leg Exercises for Lumbar Spine Surgery (continued)

Repeat 10-20 repetitions of each exercise, two to three times daily.

4. Heel Slides

- Lie on your back.
- Slide your heel upward toward your buttocks, bending your knee.
- Straighten your leg all the way down.
- Relax.
- Repeat with other leg.



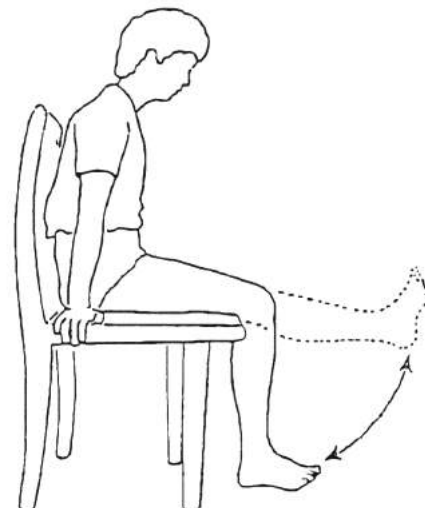
5. Lying Hip Abduction

- Lie on your back.
- Slide your leg out to the side.
- Keep your kneecap pointing toward the ceiling.
- Gently bring your leg back.
- Relax.
- Repeat with other leg.



6. Knee Extensions

- Sit in a chair.
- Straighten knee and hold briefly.
- Lower ankle to floor.



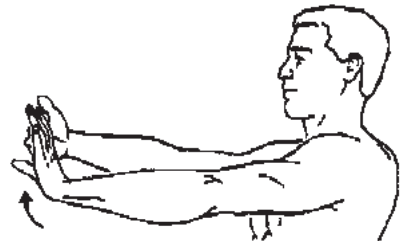
Hand Exercises for Cervical Spine Surgery

The following exercises will help maintain your hand range of motion and strength. Exercises should not increase pain. If an exercise does increase your pain, you should stop that exercise.

Repeat 10-20 repetitions of each exercise, two to three times daily.

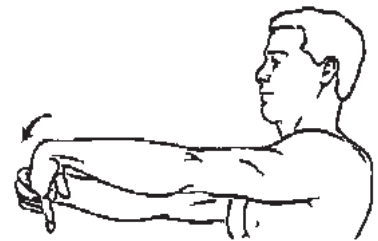
1. Hand Flexor Stretch

- Keeping elbow straight, grasp right hand.
- Slowly bend wrist back until stretch is felt.
- Hold for 5 seconds.
- Relax.
- Repeat with other hand.



2. Hand Extensor Stretch

- Keeping elbow straight, grasp right hand.
- Slowly bend wrist forward until stretch is felt.
- Hold for 5 seconds.
- Relax.
- Repeat with other hand.



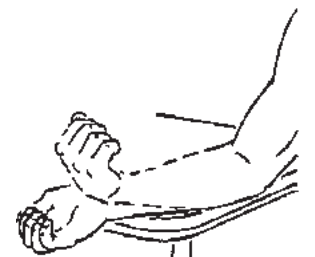
3. Elbow Flexion/Extension

- With right hand palm, gently bend elbow as far as possible.
- Then straighten arm as far as possible.
- Relax.
- Repeat with other arm.



4. Wrist Flexion

- With right hand palm up, bend wrist up.
- Relax.
- Repeat with other arm.

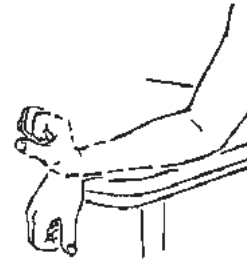


Hand Exercises for Cervical Spine Surgery (continued)

Repeat 10-20 repetitions of each exercise, two to three times daily.

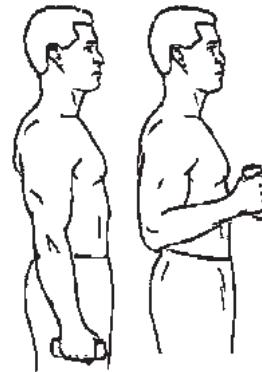
5. Wrist Extension

- With right hand down, bend wrist up.
- Relax.
- Repeat with other hand.



6. Elbow Flexion: Resisted

- Hold a 1-5 lb. weight in your right hand.
- With arm straight, thumb forward, bend elbow.
- Return slowly to straight position.
- Repeat with other arm.



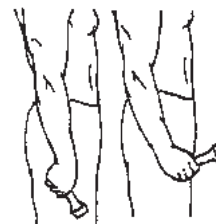
7. Wrist Ulnar Deviation: Resisted (Standing)

- Hold a 1-5 lb. weight in your right hand.
- With arm at your side, thumb forward, bend wrist forward.
- Return slowly to relaxed position.
- Repeat with other arm.



8. Wrist Ulnar Deviation: Resisted (Standing)

- Hold a 1-5 lb. weight in your right hand.
- With arm at your side, thumb forward, bend wrist back.
- Return slowly to relaxed position.
- Repeat with other arm.



Cervical Spine Exercises

Repeat 10-20 repetitions of each exercise, two to three times daily.

1. Neck Rotation

- Turn head slowly to over one shoulder.
- Hold for 5 seconds.
- Repeat to other side.



2. Lateral Neck Flexion

- Tilt head slowly toward one shoulder.
- Hold for 5 seconds.
- Repeat on other side.



3. Neck Flexion

- Bend head forward.
- Hold for 5 seconds.



4. Shoulder Shrug

- Shrug shoulders up and down.
- Shrug shoulders forward and backward.



5. External/Internal Rotation: Abduction (Standing)

- With upper arms parallel to the floor and elbows bent at right angles, gently rotate arms up then down as far as possible without pain.



Follow-Up Appointments

After surgery you will be seen in the clinic for your post-operative visit. X-rays may be obtained at your first follow-up appointment. If you had lower back surgery, you will need to wear pants without metal clasps, zippers or rivets. If you do not have elastic waistband pants, shorts will be provided for your x-ray.

If you have any post-operative questions or concerns, or need to reschedule the follow-up appointment, please contact our office:

David A. Lundin, MD

Neuroscience Institute

425.917.6209

Medical Arts Center

4033 Talbot Road. S, Suite 520

Renton, WA 98055

If you have an urgent issue that requires **immediate** attention after working hours, our answering service can be contacted at 206.575.4712.

Phone Numbers & Resources

Important Phone Numbers

Your Surgeon: _____

Practice Name: _____

Phone Number: _____

Your Primary Care Physician: _____

Practice Name: _____

Phone Number: _____

Valley Medical Center Phone Numbers

Main Operator.....	425.228.3450
Admitting.....	425.228.3440, ext. 5745
Financial Counselor.....	425.656.5599
Patient Accounts.....	425.251.5178
Chaplain/Spiritual Care.....	425.228.3440, ext. 5859
Donating to Valley Medical Center	425.656.5318
Neuroscience Institute	425.656.5566
The Present Place Gift Shop (Valley Medical Center).....	425.228.3440, ext. 5959
Patient/Visitor Information	425.228.3440, ext. 5191
Pre-operative Nurse Liaison (STAR Clinic)	425.656.5404
Pre-registration Office.....	425.251.5193
Prescription Pad Pharmacy South	425.917.6226
Prescription Pad Pharmacy North	425.656.4050
Privacy Officer.....	206.543.3098
Outpatient Surgery Center	206.656.5372
Proliance Orthopedic Associates.....	425.656.5060

Helpful Websites

Valley Medical Center	valleymed.org
Neuroscience Institute	valleymed.org/neuro
Proliance Orthopedic Associates.....	prolianceorthopedicassociates.com
North American Spine Society	spine.org
All about Back and Neck Pain.....	allaboutbackandneckpain.com
Spine Universe.....	spineuniverse.com
Spine Health	spine-health.com
Cervical Spine Research Society.....	csrs.org
Scoliosis Information for Teenagers.....	iscoliosis.com
American Academy of Orthopedic Surgeons.....	orthoinfo.aaos.org
Cervical Disc Replacement.....	synthesprodisc.com
Lumbar Disc Replacement.....	synthesprodisc.com

Notes

Notes

Lined area for taking notes.



About Valley Medical Center

At Valley Medical Center, we witness the remarkable power of life in everything we do. It's humbling, it's inspiring, and serves as a constant reminder of why we are here—to care for people.

From the comprehensive wellness check to extraordinary critical care, it is our goal to keep you and your family healthy, living pain free and leading a better life. We are proud to offer convenient, neighborhood clinics and walk-in urgent care 7 days per week. We're also there for the unexpected, with 24-hour trauma and emergency services, experienced surgeons, medical specialists, and state-of-the-art imaging, robotic and diagnostic technologies.

The Spine Center

UW Medicine

VALLEY
MEDICAL CENTER

Remarkable things happen here.™

South Tower, Fifth Floor
400 South 43rd Street
Renton, WA 98055

425.656.INFO

valleymed.org/spine