BRAIN &
SPINE INSTITUTE
OF SAN ANTONIO

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INTRODUCTION

Welcome

Quality patient care is our number one priority.

Our goal is to provide you with all the pertinent information regarding the surgical process to reduce anxiety, introduce you to the treatment team, and educate you on the entire process. With this knowledge you will become a vital member of the treatment team.

Please take the time to read this booklet which will answer common questions related to your surgery. As this is a general guide and overview, specific details may differ and will be discussed on an individual basis with your surgeon.

We are committed to providing exceptional care. Our dedicated treatment team strives to achieve goals well above the national average, elevating the standard of care.

We encourage you to keep this guide throughout the entire process. It will prove a valuable reference when questions arise.

Multi-Professional Team and Patient- Centered Care

During your hospital stay, a skilled team of healthcare professionals work together with you and your family to deliver the highest quality of care. We will care for you, guide your recovery, and provide education. This team is specially trained for spinal care and includes the following members.

Surgeon - Team Leader: The surgeon will be responsible for the spine care and work in conjunction with all the members of the treatment team.

Nurse Practitioner (NP): A healthcare provider that works with the surgeon to manage spine care. The NP provides daily assessment and treatment.

Physician Assistant (PA): A healthcare provider that works with the surgeon to manage spine care. The PA provides daily assessment and treatment.

Pre-admission Team: The pre-admission testing team will administer tests prior to surgery. The orders will be provided by the surgeon's office and reviewed by the surgeon prior to surgery.

Nurse Coordinator: The nurse coordinator will oversee the nursing care to ensure that all protocols are being implemented correctly and in a timely manner. This person will be an excellent point of contact for your care during the hospitalization.

Perioperative team: The perioperative team will help prepare the patient for surgery on the day of admission.

Operative Room team: The operative room team will provide care in the operative room during surgery.

Post Anesthesia Care Unit (PACU): The PACU team will monitor the patient after surgery while the anesthetics wear off.

Medical team/Hospitalist: This will consist of a team of medical doctors that will help provide care and address medical issues during the hospitalization. They will work in conjunction with the surgeon.

Surgical Nurses: The surgically-trained nurses will provide care in the postoperative period during the hospitalization. They will be following orders from the providers involved in the treatment.

Rehab Services: The therapy team will help with performing mobility training, activities of daily living (ADL's), ensure home safety, and assessing functional abilities.

Dietician: The dietician will ensure proper nutrition to aid in proper healing and recovery.

Leadership Team: A nurse leader may visit with you about your care experience.

Case Manager: The case manager will help in arranging for medical care after the hospitalization.

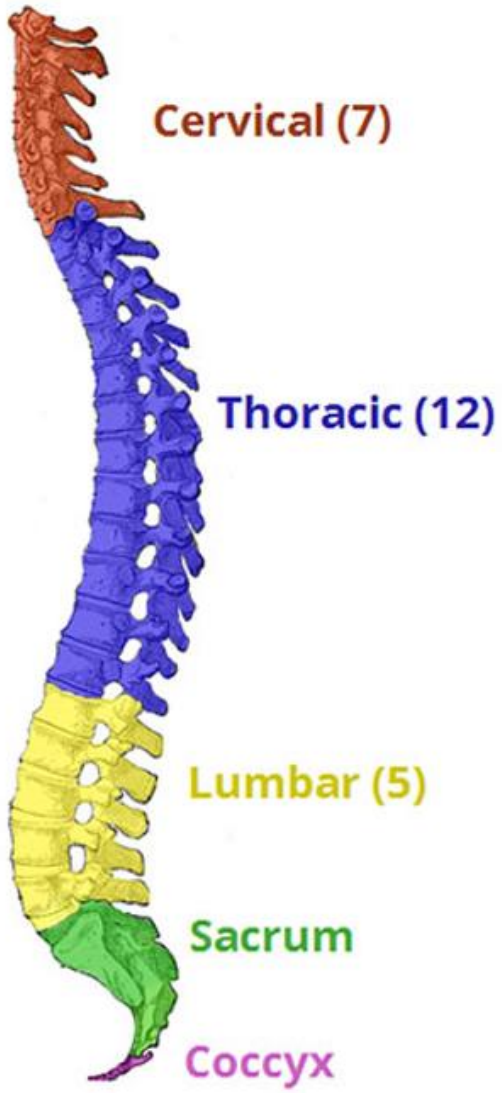
UNDERSTANDING YOUR SPINE

SPINE ANATOMY

Treatment of the spine can be a complicated task. There are several diseases that affect the spine, some of which can be treated with nonsurgical methods and some that can be treated with surgical intervention. At this point, you have likely consulted with your surgeon about your treatment. This section is to provide basic information about the spine and enlighten you to some of the terminology you may be exposed to.

Please note that this is a brief overview and specifics about your disease will be provided by your surgeon.

For more information about spine anatomy, diseases, and treatment, please visit our website.



BASIC SPINE ANATOMY

The function of the spine (sometimes called the vertebral column or spinal column) is to protect and support the spinal cord, nerve roots, and internal organs. The spine provides a base of attachment for discs, spinal ligaments, tendons and muscles. The spinal column connects the upper and lower body, provides structural support, aids in balance, and helps distribute weight. The structural elements permit forward and backward bending, spinal rotation, and combined movements within normal limits.

The spinal or vertebral column consists of 33 bony vertebrae. The regions or levels of the spine are known as the cervical (neck), thoracic (upper/middle back), lumbar (lower back), sacral (pelvic area), and coccyx (tailbone).

Vertebrae

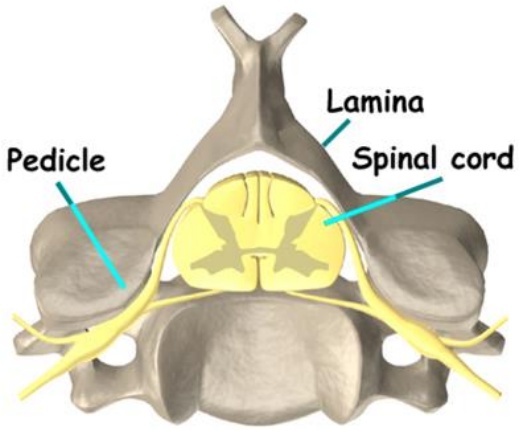
Each spinal vertebrae is composed of many different bony structures. The vertebral body is the largest part of the vertebrae.

Intervertebral Discs

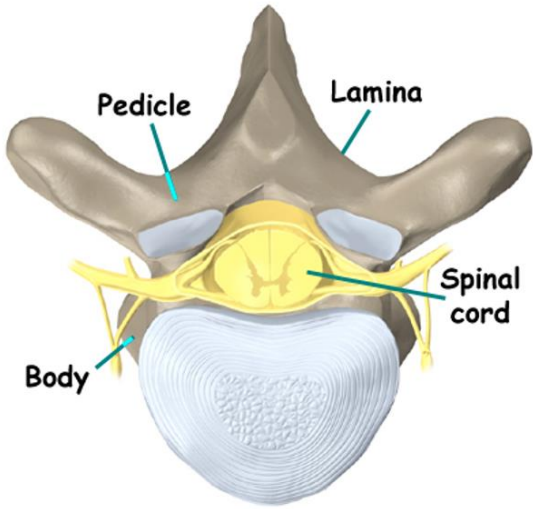
Intervertebral discs provide cushioning between the spine's vertebral bodies (with the exception of the first two cervical vertebrae). Comprised of fibrocartilaginous material, each normal sturdy intervertebral disc effectively absorbs and distributes the spinal stress you have at rest and while you are moving.

Each disc is made up of two parts: the annulus fibrosus and the nucleus pulposus. The annulus fibrosus is a sturdy tire-like outer structure that encases a gel-like center, the nucleus pulposus.

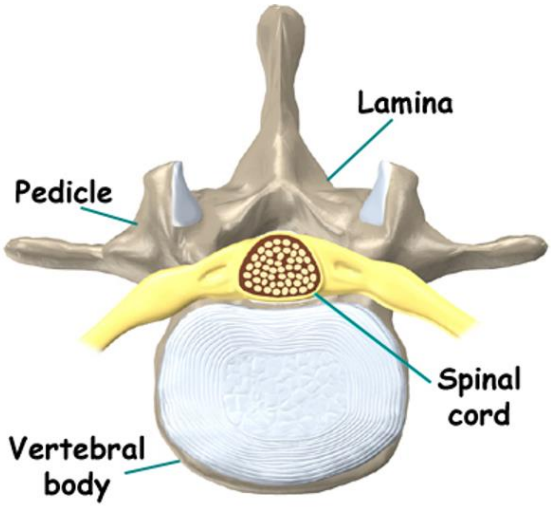
Cervical vertebrae



Thoracic vertebrae



Lumbar vertebrae



Muscles, Tendons and Ligaments

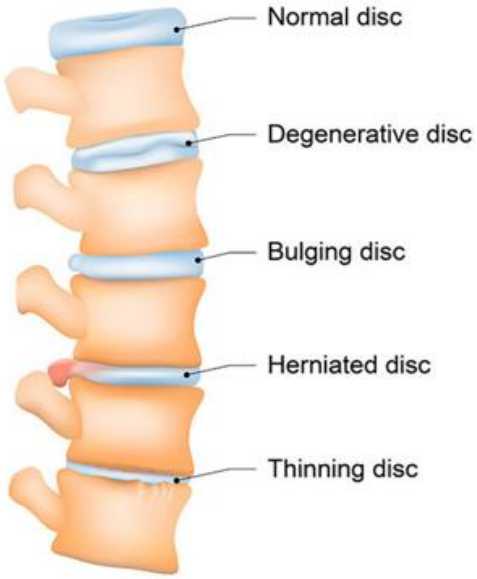
Spinal muscles, tendons and ligaments work together to keep the spine stable at rest and during activity. The muscles contract to cause the body to move.

Tendons connect the spinal musculature to the spine. Tendons are sturdy bands of fibrous connective tissue. Spinal ligaments are non-elastic fibrous bands or sheets of connective tissue that hold the bones together. Ligaments limit motion, and, if overstretched, can contribute to joint instability.

SPINAL DISORDERS

Herniated Disc

A disc herniation occurs when the outer wall of the disc (annulus fibrosus) tears, breaks open or ruptures. Some of the matter inside the disc (nucleus pulposus) leaks out and compresses nearby spinal nerves and/or the spinal cord. Although a disc herniation can occur at any level of the spine, the lumbar spine (lower back) and cervical spine (neck) are the most common locations affected. The location of the herniated disc determines where the symptoms are experienced in the body. Symptoms such as numbness and tingling, pain and/or muscle weakness may be experienced in the arm(s) or leg(s) as a result of a herniated disc.



Degenerative Disc Disease

This spinal condition comes from the normal wear-and-tear process of aging. As we age, our discs lose some of their flexibility, elasticity and shock-absorbing ability. Degenerative disc disease may become problematic if the disc height is reduced or if the disc becomes thin and stiffens.

Spinal Stenosis

Spinal stenosis is a condition characterized by the progressive narrowing of one or more areas of the spine. Spinal stenosis can result in the compression of the spinal nerves and spinal cord. Although spinal stenosis can occur anywhere in the spine, the cervical and lumbar areas are most often affected. This condition can lead to the development of pain, numbness, weakness in the arms or legs and/or cause balance disturbances.

Spondylosis

Spondylosis is arthritis of the spine. It commonly occurs in the cervical or lumbar region. As with other joints in the body, arthritis causes progressive degeneration of the cartilage and joints. Some patients do not have symptoms and others can have symptoms related to mechanical pain or nerve impingement.

Spondylolisthesis

Spondylolisthesis is a spinal condition in which one vertebra slips over another vertebra, causing a malalignment. This is due to poor joint function or a possible fracture. This can cause mechanical pain.

Radiculopathy

Radiculopathy is not a disease itself, but the result of direct pressure or compression on a nerve root due to a herniated disc or degenerative changes. The nerve roots are branches of the spinal cord that carry signals to the rest of the body at each level along the spine. The location of the radicular symptoms depends on the area supplied by the specific nerve root that is compressed.

Myelopathy

Myelopathy is a term used to describe a disease or disorder of the spinal cord, for example, spinal cord compression. Myelopathy can occur at any age and is often due to the compression of the spinal cord by bone or disc material in the cervical spine. This can cause a wide variety of symptoms: weakness, muscle atrophy, sensory changes, gait instability, lack of coordination, frequent falls, etc.

SURGICAL PROCEDURES

Anterior Cervical Discectomy and Fusion (ACDF): This surgery is indicated for nerves and/or spinal cord compression. This surgery can also be helpful in correcting a postural deformity. This surgery involves a small incision on the neck. With the use of a microscope, the diseased disc between the vertebral bodies is removed. This provides decompression of the neural elements. A cage or bone strut is placed between the vertebral bodies and secured with a plate and screws.

Cervical Arthroplasty: Also known as cervical artificial disc replacement (ADR), it is a newer alternative to the traditional ACDF. The incision and removal of disc is identical to an ACDF. Instead of a cage or bone strut between the vertebral bodies, an artificial disc is placed between the bones. This allows for motion preservation and reduces stress on adjacent segments. This also reduces the risk for subsequent surgeries.

Posterior Cervical Foraminotomy : This is a minimally invasive surgery to alleviate nerve compression. A small incision is made on the back of the neck. Once the spine is exposed, a small portion of bone is removed to decompress the pinched nerve. This does not require any hardware to be placed. Typically, the patient can go home the same day.

Posterior Cervical Laminectomy and Fusion: An alternative to an ACDF, this surgery involves an incision on the back part of the neck. The lamina is removed at the diseased levels. This provides spinal cord and nerve decompression. Then screws are placed in the bone to provide spinal stability.

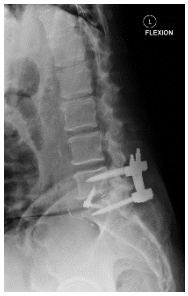
Minimal Exposure Tubular Retractor (METRx): This is a minimally invasive lumbar spine surgery. A small incision is made, and tubes are placed over onto the diseased area of the spine. With the use of a microscope, a small portion of bone is removed to decompress the affected nerve. If there is a disc herniation, that can be removed as well. The benefit of this technique provides less disruption to the surrounding tissue, thus minimizing postoperative pain. This is typically performed as an outpatient.

Lumbar Laminectomy : This surgery involves a more traditional midline incision in the lumbar spine. The lamina, previously depicted, is removed to decompress the nerves.

Lumbar Arthroplasty: Also known as lumbar artificial disc replacement (ADR). This surgery involves a small incision on the back. With the use of a microscope, the diseased disc between the vertebral bodies is removed. This provides decompression of the neural elements. Instead of a cage or bone strut between the vertebral bodies, an artificial disc is placed between the bones. This allows for motion preservation and reduces stress on adjacent segments. This also reduces the risk for subsequent surgeries.

Lumbar fusion: Similar to a lumbar laminectomy, a traditional midline incision is made in the lumbar spine. The lamina and surrounding joints are removed. This provides a more extensive decompression of the nerves. Screws will be placed into the vertebral bodies. The screws are then secured to rods. This provides mechanical stability and bony regrowth in the area, thus achieving a fusion.

TLIF: Also known as a transforaminal lumbar interbody fusion, this is an extension of a lumbar fusion. The incision, decompression of nerves, and placement of instrumentation are all similar to a lumbar fusion. The additional step involves removing the disc and placing a cage between the vertebral bodies. This enhances the biomechanical stability and bony regrowth of the construct.



Anterior Lumbar Interbody Fusion (ALIF): This surgery is performed through the abdomen. Typically, a co-surgeon will provide exposure of the spine for the spine surgeon. The spine surgeon will remove the diseased disc and place a cage between the vertebral bodies. This will restore disc height loss, provide biomechanical stability and bony regrowth between the vertebral bodies. Compared to a TLIF, the size of the cage can be larger due to the wide exposure and working area. This may be supplemented with screws from the posterior aspect to enhance biomechanical stability.

Oblique Lateral Interbody Fusion (OLIF)/Direct Lateral Interbody Fusion (DLIF): Similar to an ALIF, however, the disc is removed through a lateral approach. A cage is placed between the vertebral bodies once the diseased disc is removed. Compared to a TLIF, this can help correct an abnormal curvature in the spine. Additionally, the size of the cage is larger, thus enhancing the bony regrowth and stability. This may be supplemented with screws from the posterior aspect to enhance biomechanical stability.

Robotic/Computer Assisted Spine Surgery: The newest technology in spine surgery, robotic/computer assistance provides increase accuracy with placement of instrumentation in spine. This leads to less complications from spine surgery.

BEFORE YOUR SURGERY

PRE-REGISTRATION and PRE-ADMISSION TESTING (PAT)

Your surgeon's office will schedule your surgery with the hospital and communicate pertinent information, such as, your name, contact information, and healthcare insurance.

Before surgery, a member of the hospital's Pre-admission Testing team will contact you to verify the information and arrange your Pre-admission testing (PAT) appointment.

Pre-admission testing is generally completed prior to your scheduled surgical procedure. **Testing must be done 2-4 weeks prior to your surgery.** Under certain circumstances, pre-admission testing may be completed closer to your surgery date.

During pre-admission testing, pre-surgical instructions and education will be provided. Information about your past medical history and current medications will be requested at this time.

Although your surgeon selects which tests are to be done, routine pre-admission testing often includes:

- EKG
- Blood work
- Chest X-ray

For most tests, there is little to no preparation required. On the day of your tests, you may eat regular meals and take your regular medications unless otherwise instructed by your physician or PAT nurse. Depending on the tests ordered, please expect to be with us for 2-3 hours.

The PAT staff will conduct an assessment and review tests ordered by your surgeon. They will compile information for your medical record in advance of your surgery.

Your surgeon's office will give you instructions in regard to eating, drinking, and taking your medicine before surgery. You may be required to be cleared by your Primary Care Physician (PCP), cardiologist and/or other specialized physician. Contact your surgeon's office for more details.

The surgeon reserves the right to change the surgery date depending on the PAT results. This is ONLY to ensure patient safety and achieve the best possible outcomes.

SMOKING

Smoking is detrimental to your health and can lead to unwanted complications with spine surgery. It can result in poor wound healing, infection, or hardware failure. Smoking can also cause lung and heart complications.

DIABETES

Poorly controlled diabetes increases the risk of infection. It is routine to check a hemoglobin A1C during Pre-Admission Testing. If uncontrolled, this could delay your treatment. You may be referred to your primary care doctor to help manage your diabetes before surgery. You will be instructed on which diabetic medications to take prior to surgery and when to take them.

MEDICATIONS

Generic, prescribed, and over-the-counter medications will be reviewed with your surgeon. Take only those medications as directed by the surgeon prior to your surgery.

Prescriptions will be given to you prior to admission to the hospital for you to obtain before you have surgery. This is to ensure you have your medications available when you return home and there is no delay in administration of meds.

☐ **Check if you take NSAIDS**

Stop taking NSAIDS 7-14 days before surgery.

(Nonsteroidal Anti-inflammatory Drugs)
Examples:

Advil	**Aleve**
Aspirin	**Ibuprofen**
Motrin	**Voltaren**
Relafen	**Diclofenac**
Celebrex	**Mobic**
Naproxen	**Naprosyn**
Excedrin	

☐ **Check if you take blood thinners**

Notify surgeon if you are taking blood thinners. Instructions will be provided on when to stop these prior to surgery.

AFTER SURGERY, the surgeon will instruct you when it is safe to restart the medications.

Examples:

Coumadin	**Pradaxa**
Warfarin	**Plavix**
Heparin	**Brilinta**
Lovenox	**Aggrenox**
Xarelto	**Aspirin**
Eliquis	**tPA**

Important Message

Please review instructions from surgeon on which medications need to be stopped prior to your surgery. This is CRITICAL as your surgery may be postponed or cancelled if not followed.

NUTRITION AND DIET

Eating a balanced diet is essential for recovery and infection prevention. Use the following guidelines to enhance your recovery from surgery. Check with your physician if you are following a special diet, such as carb-controlled, low sodium, or renal diet.

Our hospital dietician will ensure that proper nutritional goals are being met during the hospitalization.

- **Protein** helps with tissue repair and regrowth. Be sure a good portion of your calories come from poultry, fish, eggs, tofu, low-fat dairy products, kidney beans, lentils, chickpeas, nuts and seeds.

- **Fiber and water** are essential to help alleviate constipation. Water flushes out toxins and carries nutrients to your cells and prevents gas and bloating. High-fiber foods, such as whole grains, fresh fruits and vegetables assist with this. You can get a natural laxative effective from eating prunes or drinking prune juice. **Before your surgery, begin a high fiber diet to aid in regular bowel movements to help avoid constipation due to anesthesia and pain medications.**

- **Vitamin D** promotes bone healing and plays a vital role in maintaining normal functions of muscles. It helps with the absorption of calcium for the bone's health. Fortified dairy products, orange juice, cereals, egg yolks and fatty fish are good options.

- **Vitamin K** helps promote strong bones by binding calcium and other minerals to the bone. It is essential for blood clotting to prevent excessive bleeding. Good sources are broccoli, Brussel sprouts, cauliflower, dairy products, eggs, kale, and vegetable oils (olive and canola).

ADVANCED DIRECTIVES

Hospitals are legally required to provide information on advanced directives to every patient. Advanced directives are legal documents containing information about your healthcare decisions. If you currently have advanced directives, please bring a copy to the hospital. **Please communicate your Advanced Directive wishes to your surgeon and treatment team.**

PRE-SURGERY CHECKLIST: **Check off each item when completed!**

2-4 Weeks before surgery

□ Confirm medications you need to stop taking prior to surgery. Consult with your surgeon's office if you have any questions.
□ Consider potential needs for discharge, such as, preparing your home after surgery.
□ Stop smoking.
□ Make arrangements for childcare and/or pet care.
□ Obtain your spinal brace. If you have not done this, please contact the surgeon's office.
□ Pre-admission testing appointment.

1 Week before surgery

□ Fill prescribed medications and have them available when you arrive home from the hospital.
□ Stock up on essential items and place within reach to avoid bending and stooping.
□ Remove throw rugs or other obstacles in the home.
□ Prepare or freeze meals in advance.
□ Arrange for transportation from hospital to home.

Special Instructions for showering prior to surgery

□ Beginning 2 nights before surgery, you will shower with the special soap provided.
□ Repeat shower the night before surgery, and the day of surgery with special soap.

Day before surgery

□ Pack personal items (toothbrush, toothpaste, deodorant, glasses/contact lenses, containers.
□ Bring loose fitting, comfortable clothes and sneakers. **NO** flip flops or slippers.
□ Copy of Advanced Directives.
□ Bring spinal brace or cervical collar.
□ Personal CPAP equipment if you use while sleeping. Our staff will check for safety.
□ Bring current medication list, including dosages and times you take them.
□ **Bring your Spine Surgery Patient Education Guidebook to hospital and to all your appointments with your surgeon.**
□ **NIGHT BEFORE SURGERY:** The night before surgery, take a shower using antibacterial soap, get dressed in clean pajamas, and sleep in clean bed linens.

IMPORTANT REMINDERS:

Before you leave home, we ask that you do the following:

- ✓ Leave jewelry and valuables at home, except for ID and insurance or payment information.
- ✓ Do not wear any facial cosmetics, cologne or perfume on day of surgery.

SURGERY

PRE-OPERATIVE ROOM (Pre-op)

On the day of your surgery, you will be taken to the Pre-op area where a nurse will make sure you are prepared for surgery and your medical record contains the necessary documentation for your surgical procedure.

The nurse will verify your name, date of birth, medical history, and medications you may have taken before surgery. Additionally, the nurse will confirm your surgery with you and verify the Informed Consent is prepared and signed. This may be signed in the surgeon's office prior to arriving in Pre-op. The Informed Consent provides confirmation that you and your surgeon have discussed the operation and alternative treatments, and you understand the potential complications associated with the surgery.

We will ask your name, date of birth, and other medical information frequently for safety purposes.

Family members or friends are welcome to wait in the surgical waiting area during your surgical time. In the Pre-op area, you will be asked to remove any of the following items:

- Dentures and bridges
- Hearing aids
- Contact lenses/glasses
- Body piercing/jewelry
- Wigs, hairpins, and combs

You will be asked to remove your clothes and change into a hospital gown and cap, if not already done. The nurse will place an intravenous needle (IV) in a vein in your arm or wrist. This needle is attached to a tube that will supply you with fluids, medications or blood during and after the surgery.

OPERATING ROOM (OR)

The operating room nurse will transport you from the Pre-op area to the Operating Room (OR). This is where the operating room team will provide care for you. When you arrive, anesthesia staff will attach monitors to you to track your heart rate during surgery. Then the anesthesiologist will put you to sleep. Depending on the surgery, the surgeon may request a Foley catheter to be inserted into your bladder to drain urine. This is typically inserted for longer surgeries. Leg compressions will be placed to prevent blood clots in legs.

POST ANESTHESIA CARE UNIT (PACU)

After surgery is complete, you will be taken to the PACU while the surgeon discusses the results of your surgery with your family in the waiting room.

The PACU team will care for you during your recovery phase of surgery. You will continue to be monitored closely as the anesthesia wears off and you begin to wake up. It is possible you will experience discomfort as you wake up from the anesthesia. This can be expected. Also, due to the medications administered during surgery, you may not clearly recall parts of this recovery phase.

The most common side effects after anesthesia include nausea, sore throat, dizziness or headache. The PACU team will administer medications to help minimize the side effects and keep you as comfortable as possible.

If you are having outpatient surgery, you will be transported to a second level of recovery, called Phase 2, in anticipation of discharge. In Phase 2 Recovery, the nurse will ambulate (walk) you and ensure you are able to urinate.

Post-operative instructions, along with prescriptions will be provided by the surgeon's office prior to surgery. It is important to have these prescriptions filled and ready for use at home to avoid delay in pain control. Additional instructions may be given before you leave the hospital.

SAFETY

Your safety is very important to us.

The surgery and the medications often cause patients to feel dizzy, weak, and unsteady on their feet. This can result in falls.

If you need to get out of bed or out of the chair for any reason, you must call for nursing staff assistance.

As a precaution, all spine surgery patients are placed on "Fall Precautions" immediately after surgery.

Our staff will round on your frequently to offer assistance to the restroom, and any other requests.

Our goal is to keep you safe.

AFTER YOUR SURGERY

Once you are more fully awake and your vital signs are stable, you will be moved to your hospital room. There, the nurse will perform an initial assessment, re-checking your vital signs, the incisional dressing, and assisting with your comfort.

During your post-operative phase, you can expect:

- Frequent assessments of your blood pressure, heart rate, respiratory rate and temperature.
- Frequent questions about pain, muscle spasms, and nausea.
- Frequent questions relating to your spinal surgery and whether you are experiencing any numbness, tingling, or weakness.
- Patient education about discharge plans, medication, and post-discharge care.

This chapter will cover the routine standards of care you will receive and provide information helpful for your recovery.

PHYSICAL THERAPY (PT)

A physical therapist (PT) will visit you on the day of surgery or the day after surgery. You will be asked to sit up in bed on the same day of surgery. Ambulation (walking) will begin the day after surgery.

PT will assess your mobility and strength and educate you on proper body mechanics when ambulating. Remember to use these techniques when ambulating in the future. Although there will be discomfort when walking after surgery, your recovery will be faster, and hospitalization will be shorter the more you ambulate.

You are encouraged to ambulate 2-3 times per day. This will decrease post-operative complications, such as blood clots in the legs, pneumonia, and constipation.

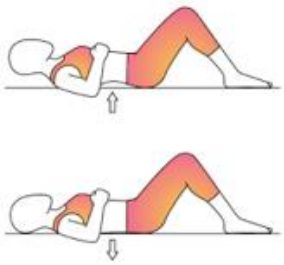
PT will also assess your need for any assistive devices, such as a walker. As you progress, PT will determine the level of care you need after discharge and provide a recommendation to the surgeon. If a higher level of care is needed after your hospitalization, the case manager will help make the proper arrangements.

For the first two weeks after surgery, your surgeon encourages ONLY ambulation. Increase in activity level will be under the guidance of your surgeon and discussed during post-discharge appointments with your surgeon.

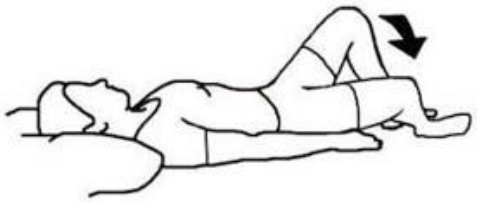
The therapist will review exercises with you and develop a plan specific to your needs. Here are basic exercises you can do after surgery. If you develop any discomfort, do not continue the exercise.

LUMBAR EXERCISES

Abdominal bracing



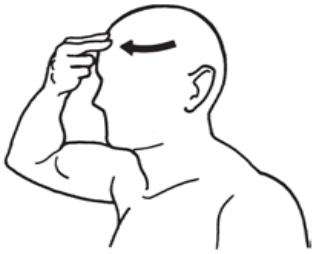
Bent knee fall out



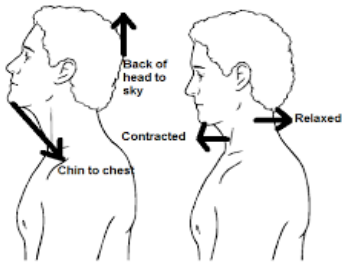
Glute set

CERVICAL EXERCISES

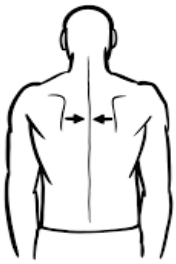
2 finger isometrics



Chin tuck



Scapular retraction



OCCUPATIONAL THERAPY (OT)

An occupational therapist (OT) will your ability to complete activities of daily living (ADL's), such as bathing, showering, toileting, getting dressed, and meal preparation. OT will ask questions about your home environment, assess possible obstacles after discharge, and recommend home modifications and adaptive equipment.

The OT will teach you how to perform certain activities using proper body mechanics and spine precautions.

You may receive assistive devices to help with your post-operative transition to home. These devices may include:

- Reacher – to help extend your reach to put on pants and pick up items.
- Sock-aid – to help you put on your socks without bending over.
- Long handled bath sponge – to help wash your legs and feet.
- Walker – to help steady your gait if balance is weak.

SPINAL BRACE or CERVICAL COLLAR

- You should have received your brace or collar prior to surgery.
- **You are required to wear your brace/collar at all times when out of bed.**
- Do not wear the brace/collar when sleeping at night.
- Wear the brace outside of your clothes.
- The brace/collar will help with spinal stabilization and prevent unapproved movements.

LYING POSTURE

The goal is to keep your spine in a neutral position. If your spine is in an uncomfortable position for too long, it can lead to pain.

- Support your head with one pillow.
- If lying on your back, a pillow under your knees will reduce back strain.
- If lying on your side, bend your knees slightly. Placing a pillow between your knees may provide comfort.
- If lying on your incision, change your position every 2 hours to avoid long-term pressure.

ACTIVITIES AND EXERCISE

Remember to use correct body mechanics and spine precautions during your recovery period.

- Do not lift greater than 10 pounds until cleared by your surgeon.
- Minimize bending, lifting, or twisting.
- Do not run, lift weights, or play any kind of sports until cleared by your surgeon.
- Daily short walks are better than one long walk.
- Take rest breaks throughout the day during your first 2-3 weeks after surgery.
- Take your time and move slowly, especially when changing positions.

- THE ONLY EXERCISE THAT YOU ARE ALLOWED TO DO IS WALK!

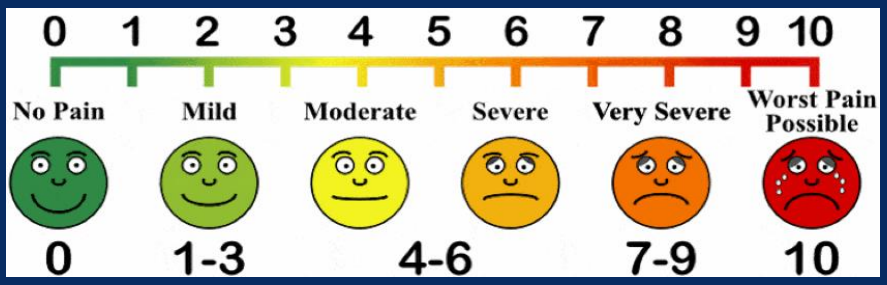
PAIN MANAGEMENT

After surgery, you will experience varying levels of pain. The nursing staff will assess your pain frequently throughout the day. A pain scale will be used to help determine the level of your pain and how best to treat this level. In your hospital room, there is a pain scale, and the nurse will utilize this scale to communicate to the team your pain level and pain medication you received for the pain.

Certain medications will be scheduled, and administration of the medications will be encouraged despite the pain level. Additional medications will be available for pain management as needed (PRN).

Our goal is managing your pain to a reasonable level and to administer pain meds in pill form as soon as possible because pills provide longer lasting pain control than IV pain medications. This allows for shorter hospitalizations.

Your nurse will ask you what you rate your pain using this scale.



When you request pain medicine, it will be given to you either by mouth (PO) or intravenously (IV). Remember that it is **very important** to control your pain.

Although your pain may be tolerable at a specific moment, you have to anticipate worsening pain, the amount of time it will take to obtain the medication from the pharmacy, time it will take to administer the medication, and the time it will take for the medication to take effect. Delays may lead to discomfort and pain.

We strongly encourage pain medication prior to therapy sessions. Without adequate pain control, participation with therapy will be challenging, thus lengthening your recovery and hospitalization.

Pain medication scheduled PRN (as needed) is not on a schedule throughout the day. Let your nurse know about your pain BEFORE it is 8-10.

MEDICATIONS

After surgery, you will resume all home medications except for blood thinners. Your home medications will be provided by the hospital pharmacy.

Please do not bring your own supply of medications to the hospital. On rare occasions, if our hospital pharmacy does not stock your medication, we will review your medication with a pharmacist, inventory your medicine and administer your medication from your supply. Upon discharge, we will send your medication home with you.

MUSCLE SPASM

Muscle spasms are a very common symptom after spinal surgery. Your surgeon will order medications for muscle spasms. Some medications will be scheduled, and some will be ordered as needed (PRN) for breakthrough pain.

NAUSEA

Nausea is another common symptom after surgery. This can be related to the anesthesia, pain, or pain medications. Notify your nurse if you experience nausea. Medications will be available to help alleviate this symptom. We recommend that you do not take your pain medication on an empty stomach.

DRAINS

You may have a drain in your surgical incision. The drain will be placed during surgery and is referred to as a JP drain (named after the inventor, Jackson Pratt). The JP drain promotes healing, prevents swelling or complications by draining the fluid from the wound. The drain and fluid are monitored by the nurse and will be removed when the surgeon approves it.

NUTRITION AND DIET

A dietician will be assigned to you during your hospitalization to ensure proper nutrition. You will be started on a liquid diet when you arrive to your hospital room. If you do not experience nausea or vomiting, your diet will be advanced as tolerated.

Eating a healthy, well-balanced diet is essential in wound healing. Increasing protein-rich foods is encouraged, along with vegetables and fruit. It is important to consume foods high in fiber to avoid constipation.

If you are on a special diet, such as renal or carb-controlled, your dietician will select the most compatible menu for you.

Please let us know if you are not satisfied with the menu choices. Our Food and Nutrition Services will be happy to assist with menu and beverage selections.

POTENTIAL POST-OPERATIVE COMPLICATIONS

CONSTIPATION

There are several factors that cause constipation after spinal surgery. You will be placed on medications to prevent this from occurring. Additionally, ambulation can help minimize or avoid constipation.

Prior to discharge, you must have a bowel movement.

PNEUMONIA

Deep breathing exercises are required to prevent pneumonia. Your nurse will instruct you on how to use an incentive spirometer (IS). It is highly recommended you perform this lung exercise every hour while awake during your hospitalization, and then at least 3-4 times per day after discharge for 7 days.

DEEP VEIN THROMBOSIS

Due to decreased mobility and ambulation, there is an increased risk for blood clots in your legs. We will place sequential compression devices (SCDs) on your legs after surgery. The device will squeeze your legs periodically to promote blood circulation.

While in bed, it is recommended to use the SCDs. Before ambulation, they will be removed.

Walking is the best treatment to avoid blood clots.
Make an effort to stand up and walk every 1-2 hours.

INFECTION

A surgical site infection is an inherent risk of surgery; however, you can take measures to minimize the risk:

- Wash your hands frequently.
- Maintain tight glucose control if you are diabetic.
- Avoid laying on incision for long periods of time.
- Avoid smoking.
- Keep incision clean and dry.
- Avoid sweating on incision.
- Avoid touching or scratching incision or dressing.
- Eat well-balanced, protein enriched meals.

DISCHARGE

Before your discharge, please ensure that you have a post-operative folder from the surgeon's office. This folder includes post-op instructions and information about your first post-op follow-up visit.

Prescriptions from the surgeon for your post-operative period will have been provided prior to surgery. As a reminder, it is important to have the prescriptions filled prior to discharge to avoid delay in pain management.

FOLLOW UP APPOINTMENT

Before surgery, your surgeon's office staff will schedule your follow up appointment with you. It is important to review the information provided by the surgeon regarding your post-operative care and visits. If you have any questions regarding this, please ask your nurse for assistance.

Contact your surgeon if you experience:

- **Persistent fevers greater than 101° F**
- **Large amounts of drainage from incision**
- **Incisional drainage of any amount has a foul odor**
- **Drainage is purulent (pus colored)**

THERAPY

At your follow up visit with your surgeon, therapy will be discussed. Your surgeon will decide when you will begin physical therapy and whether you will need occupational therapy.

SPINAL BRACE or CERVICAL COLLAR

When out of bed, wear your spinal brace or cervical collar. You are to remove the brace or collar to sleep at night. Remember to wear your spinal brace over your clothing.

ACTIVITIES AND EXERCISES

The ONLY exercise allowed is walking. Your surgeon will advance your activity.
NO bending.
NO lifting anything over 10 pounds.
NO twisting.
Use proper body mechanics.

MEDICATIONS

Do not take NSAIDs or blood thinners unless cleared by your surgeon.
Please resume your regularly scheduled home medications after discharge.
Refer to Page 12 for list of NSAIDs and blood thinners.

DRIVING

Do NOT drive until cleared by your surgeon.

SEXUAL ACTIVITY

Check with your surgeon regarding any restrictions.

RETURNING TO WORK

Your surgeon will clear you to return to work or school. This will be discussed in your follow up appointment with your surgeon after discharge.

BRAIN & SPINE INSTITUTE
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