

Saint Luke's Spine Surgery Guidebook



Thank you for choosing Saint Luke’s Hospital of Kansas City’s Spine Surgery Program to help restore your spine function. We are committed to providing you with the best Health Care experience by combining clinical excellence and patient-center care that will get you back to your normal activity level as quickly as possible.

We strongly believe that you, as a patient, play a key role in ensuring a successful recovery. Our goal is to empower you with the necessary knowledge and involve you in your treatment plan at each step of your recovery. This guidebook is designed to provide you with the information needed to help you and your loved ones navigate the spine surgery process before, during, and after surgery.

Please just use this as a guide. Your surgeon, nurse, or therapist may add to or change recommendations that better suits your surgical process.

Table of Contents

• Date/Time/Location.....	2
• Get to know your Spine.....	3
• Common Surgeries and Terminology.....	4-5
• How to Enhance Post Operative Healing.....	6
• Pre-Surgery Appointments/Medical Clearances	7
• At Home Preparation.....	8
• Insurance, FMLA, and Short-Term Disability.....	9
• Medication Holds.....	10
• Day of Surgery Prep.....	11
• After Surgery Expectations & Pain Management.....	12-14
• Activity & Bracing.....	15
• Discharge from the Hospital.....	16-17
• Frequently Asked Questions.....	18-19
• Notes.....	20

Date of Surgery:

Time of Surgery: You will receive a call one week prior to surgery with check in and surgery start time.

Location of Surgery:

Saint Luke's Marion Block Neuroscience Institute

4401 Wornall Rd

Kansas City, MO 64111

South side of campus. Follow signs to entrance A, park in parking garage A, second entrance on the right, after security booth. Enter the hospital on level 1 and check in with admitting.

For directional assistance call: 816-932-5858



Saint Luke's East Hospital

100 NE Saint Luke's Blvd

Lee's Summit, MO 64086

*Enter through their main entrance, which is in the middle of the horseshow complex. There is a large parking lot right in front of the main entrance.

Admitting will be to the left once you enter the hospital.



Important Contact information

Saint Luke's Neurosurgery Clinic: 816-932-2700

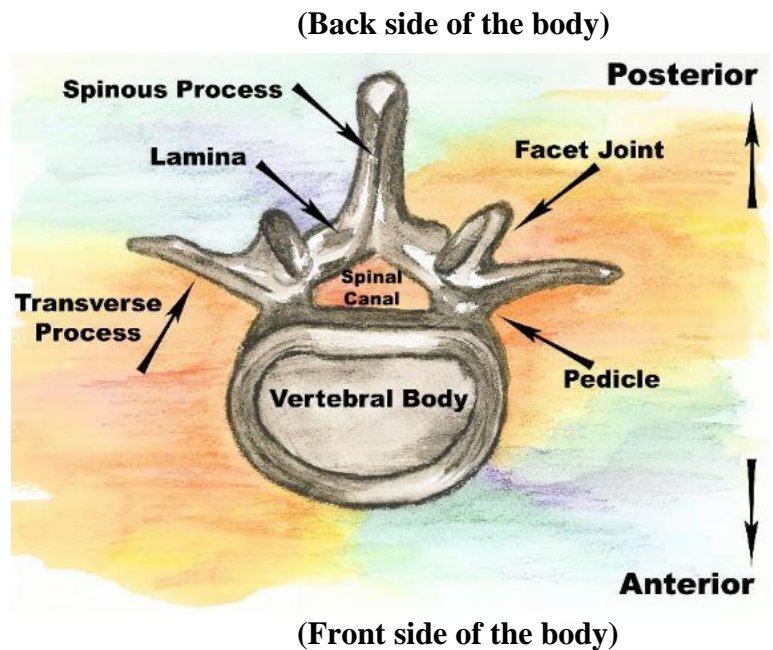
Spine Nurse Navigator: 816-932-9869

We are offering a Spine Surgery Pre-Op Class to review how to best prepare for surgery and help you fully understand what to expect during your surgical process & recovery. Please call our office if you would like assistance with signing up for the pre op class- It is offered in person & virtually

Get to Know Your Spine

Spine Anatomy

- The Spine is made of bones (vertebrae) and soft pads of tissue (discs)
- A healthy spine supports the body while letting it move freely. It does this with the help of three natural curves and strong, flexible muscles.
- The spinal column is made up of 7 vertebrae in the cervical spine, 12 vertebrae in the thoracic, 5 vertebrae in the lumbar spine, and 5 fused vertebrae in the sacral spine.
- When properly aligned, the three curves created from the cervical, thoracic, and lumbar spine help keep your body balanced.



Common Spine and Disc Terminology

Spondylosis: This refers to wear and tear of the spine. As we age our spine degenerates. Some lifestyle factors that are associated with increased spondylosis include smoking, obesity, and labor-intensive jobs. These degenerative changes can result in disc bulging and herniation, facet arthropathy, spondylolisthesis, and spinal stenosis.

Degenerative disc disease: The intervertebral disc is oriented between two vertebral bodies and acts as a shock absorber between the bones. As the disc degenerates the outer layer of the disc can become weak and make individuals more prone to disc bulging and herniation.

Facet Arthropathy: The spinal vertebrae are connected to each other posteriorly through the facet joints. The facet joints allow for bending and twisting. As the facets degenerate there can be inflammation within the joint that can cause bone spurs and overgrowth of some spinal ligaments. When the facet joint is severely arthritic it can cause pressure and irritation on the nerves.

Spondylolisthesis: This refers to an instability of the spine that can contribute to back and leg pain. Typically, when we bend and twist the bones in the spine move in tandem with each other. With spondylolisthesis there is abnormal movement of the bones in which one vertebra has moved forward or backward, in relation to the one above or below it. This may put pressure on the disc and cause nerve irritation.

Spinal Stenosis: The nerves in the spine travel through the spinal canal. When there is narrowing of the spinal canal this is referred to as stenosis. Stenosis can be a result of degenerative disc disease, facet arthropathy, and spondylolisthesis. When the spinal canal is narrow it can cause nerve compression resulting in pain, weakness, numbness, and tingling.

Common Surgery Procedures

Spinal Fusion

- A Spinal fusion is a surgical procedure that is used to “weld or lock” together two or more vertebrae to stop painful motion, correct scoliosis, or relieve pinched nerves. Your surgeon will use screws, rods, and an interbody graft to fuse the targeted area in your spine.
 - The level of a spinal fusion will depend on the location of your pain:
 - Neck (cervical fusion)
 - Mid back (thoracic fusion)
 - Low back (lumbar fusion)

Anterior or Posterior Cervical Decompression and Fusion

- In an anterior cervical fusion, a herniated or degenerative vertebral disc in your neck will be removed and replaced with a bone graft. This can relieve painful pressure on spinal nerves.
- In a posterior cervical fusion, the spinous process and lamina will be removed to give your spinal cord and nerves more space.

Anterior or Posterior Lumbar Fusion

- This surgery is used to treat back and/or leg pain caused by degenerative disc disease, injury, scoliosis, unstable spine, etc. Your surgeon will stabilize the spine by fusing vertebrae together with bone graft material.
- This surgery can be done from the front (anterior) or back (posterior) of your body.
- If you are having an anterior lumbar fusion, you will also meet with vascular surgery prior to your surgery. You will have a slightly different post operative plan so please ensure you understand this prior to your surgery.

Discectomy

- This surgery is designed to relieve pain caused by a herniated disc pressing on the nerve roots. This is usually performed on an outpatient basis, which allows the patient to leave the hospital same day.

Laminectomy and Foraminotomy

- This procedure relieves pressure on the nerve roots in the spine. It is most commonly performed to relieve the pain from stenosis. This is a narrowing of the spinal canal that is often caused by the formation of bony growths that can press against the nerve roots. The surgeon may treat one or more vertebrae.

How to Enhance your Post Operative Healing

Stop Smoking

- Stop smoking and using any nicotine products 6 weeks prior to surgery. Most insurance companies will require you to stop smoking prior to approving your surgery.
- Smoking can put additional stress on your body and lead to delayed wound healing after surgery.
- Please contact your primary care provider if needing assistance with smoke cessation.

Weight Management

- It is important to maintain a healthy weight before and after surgery.
- Your surgeon may recommend weight improvement prior to surgery.
- Being overweight or underweight can lead to complications post-surgery. Complications include difficulties with pain, blood clots, blood loss, increased risk for needing additional surgeries, etc.
- Notify your surgeon if you are interested in discussing resources for weight management.

Nutrition

- Nutritional health plays an important role in post operative healing.
- It is important to understand a diet that can help your body heal and gain strength.
- Additional protein and supplemental vitamin C and D can aid in healing.
- Foods high in fiber (vegetables, grains, fruits, etc.) can help to avoid constipation after surgery.
- It is also very important to stay hydrated.

Pre-Surgery Appointments/Clearances

- Specialized appointments and testing may be requested by your surgeon prior to surgery.
- **Cardiology:** If you have heart problems or are currently taking a blood thinning medication (Plavix, Eliquis, Xarelto, Aspirin, Coumadin, etc.), your surgeon will request clearance from your cardiologist.
- **Pulmonology:** If you are seeing a pulmonologist for any lung related problems (COPD, Asthma, etc.), your surgeon will request clearance from your pulmonologist.
- **Primary Care Provider:** Your surgeon may request clearance from your primary care provider, this is on an individualized patient basis.
- Prior to surgery, if you experience any new heart, lung, or health related issues, please notify your surgeon.
- Your surgeon may require labs within 30 days of your surgery.

Pre-Anesthesia Testing

- One week prior to surgery, you will receive a call from a pre-anesthesia testing nurse. You will discuss medications, medical and surgical history.
- During this phone call, you will discuss what medications need to be held morning of surgery and which ones you may continue.
- Any medications that have been approved for you to take morning of surgery can be taken with a sip of water.
- Additional lab draws or diagnostic testing may be recommended morning of surgery.

Reminder: You will receive a call one week prior to surgery to receive a check in and surgery start time.

Tips for Preparing for Surgery

At Home Preparation

- It is important to prepare your home and prepare for care after surgery. To help reduce your risk of falls and/or injury postop:
 - Remove throw rugs, cords, and clutter from floor or stairs.
 - Keep floors and stairs free of clutter and cords.
 - Arrange furniture so there are clear pathways.
 - Place all items you may need within reach.
 - Arrange assistance with household activities: vacuuming, pet care, lawn care, laundry, etc.
- Bathrooms
 - Grab bars can be installed in tub or shower (this is not required)
 - Apply a nonskid rubber mat in the tub or shower.
 - Use shower chair if needed.

Arrange for Help

- Depending on the type of surgery, the level assistance you will require may vary. A general recommendation would be having a family member or friend stay with you for at least one week after surgery.
- **A family member or friend is beneficial to help with cooking and cleaning.**
 - Pre-plan meals
 - Keep in mind laundry, unloading the dishwasher, vacuuming become difficult with post op spinal precautions.
- Help caring for your pet.
 - Avoid walking dogs on a leash, cleaning up after your pet, and refreshing dog bowls.

There are a few hotels in the Kansas City area that do offer prorated rates for patients.

- Embassy Suites by Hilton-Plaza
- AC Marriott
- Hampton Inn

Insurance and Surgery Scheduling

- Our insurance authorization team will obtain pre-authorization for your surgery.
- It is important for you to call your insurance company as well to understand your benefits.
- For questions regarding deductible, how much your insurance will pay, etc., please contact your insurance company.
- Our authorization specialists may contact you via telephone with questions or additional information.

Family Medical Leave Act (FMLA)/Short Term Disability (STD)

- If you are scheduled for surgery, please notify our office if you are needing FMLA or short-term disability paperwork completed.
- Paperwork can be faxed to our office or sent in via the patient portal.
Neurosurgery Clinic fax # 816-932-2705
- Please allow for 7-10 business days for our office to complete your paperwork.
- We do not complete long term disability requests.

Medication Holds

Please stop all NSAIDs, vitamins, and supplements one week prior to surgery.

- Commonly used NSAIDs:

Ibuprofen (Advil, Motrin)

Diclofenac (Voltaren)

Naproxen (Aleve)

Ketorolac (Toradol)

Celecoxib (Celebrex)

BC Powder

Mobic (meloxicam)

Please notify your surgeon if you are taking any blood thinning medications.

- Common blood thinning medications:

Aspirin

Clopidogrel (Plavix)

Warfarin (Coumadin)

Apixaban (Eliquis)

Rivaroxaban (Xarelto)

Ticagrelor (Brilinta)

Stop the use of diet pills, GLP-1 injections, and herbal or natural supplements.

Please notify your surgeon if you are taking any oral steroids or immunosuppressants (Methotrexate, Prednisone, Plaquenil, Azathioprine, etc.)

*****You may be asked to stop any blood thinning, steroid, or immunosuppressant medications with permission from your prescribing doctor. Our office will work with your providers to determine appropriate medication hold*****

Bathing

- Bathe with chlorhexidine or antibacterial soap for 5 consecutive days prior to surgery, the 5th day being the morning of surgery. Target the surgical site and surrounding skin. You do not need to wash your face or genitals with the chlorhexidine soap.
 - **This is important to reduce your risk of post op infection.**

Fasting Instructions

- Nothing to eat 8 hours prior to your arrival time (10 hours prior to surgery start time)
- You can have clear liquids up to 2 hours prior to your arrival time (4 hours prior to surgery start time)
- Please drink 20oz of a carbohydrate drink (Gatorade, Powerade, etc.) 2 hours prior to arrival time. Any color but red.

Day of Surgery!

- You can brush your teeth. No chewing gum, cough drops, or mints within 8 hours of arrival time.
- Shower with Chlorhexidine (CHG) or antibacterial soap the morning of surgery.
- Do NOT wear any perfume, lotions, creams, deodorant, make up, etc. No artificial nails.
- Wear comfortable, loose-fitting clothing. Remove any piercings.
- Please bring your ID, insurance card, and form of payment (our billing department will notify you ahead of time with amount needed at the time of surgery). Do NOT bring any valuables to the hospital.
- Please bring a list of your current medications: name, dose, frequency, and the last time you took the medication.
 - Please do not physically bring any of your medications to the hospital.
- If you wear a CPAP for sleep apnea, please bring your own device to the hospital.
- Plan to arrive at your scheduled arrival time, check in with admitting.

Pre-Operative

- You will meet with your surgeon, advanced practice provider, and an anesthesiologist morning of surgery.
- IV, vital signs, labs, and surgical consent will be obtained.
- MRSA decolonization: your pre-op nurse will swab the inside of both of your nostrils with iodine-povidone for nasal decolonization of MRSA.
- Intraoperative Neurophysiological Monitoring (IONM): IONM is a tool that may be utilized during your surgery but is not necessary for all surgeries. If your surgeon decides to use this, then you will meet with the IOM technologist who will discuss the procedure and place electrodes on your wrist and ankles. This procedure is used to monitor your brain, spinal cord, and nerves while the surgeon works in and around those sensitive areas. During your procedure, small acupuncture-like needles may be used on your legs, arms, trunk, and scalp. When you wake up you may see a small amount of blood or minor bruising in these areas.
- During surgery, your family will wait in the surgical waiting room. Your surgeon will speak with you and your family after surgery.

After Surgery

- You will recover in the post anesthesia care unit for about two hours. There you will begin taking sips of liquids and receive pain medications. Vital signs will be monitored. Visitation may be limited as you are waking up.
- If you are discharging home day of surgery, your pain will need to be controlled with oral medications, you will need to empty your bladder fully and ambulate safely.
- If you are staying the night, you will be transferred to a hospital room in the Neuroscience Institute.
- You are allowed to have visitors while you are in the hospital. One visitor may stay the night.

Post Operative Pain Management

- We will ask your pain level 1-10, 10 being the worst pain you could ever imagine. This will help us determine the best method to treat your pain and to help keep track of any improving/worsening pain.
- You will be started on a multimodal pain regimen, this includes:
 - Tylenol 1000mg every 8 hours, do not exceed 3,000 in 24 hours.
 - Narcotic pain medication such as oxycodone or hydrocodone
 - Muscle relaxant
 - An IV narcotic pain medication will be ordered that can be used for break through pain to provide quick relief.
- **The oral and IV narcotic pain medication will be an as needed medication that you will need to ask for when you feel your pain rising.**
 - It is important to understand the multimodal pain regimen and discuss with your nurse scheduled vs as needed (PRN) medications.
- Other ways to manage pain—mobilization, ice, repositioning, etc.
- Notify your surgeon, APP, or nurse if you feel your pain regimen is not adequately managing pain.

We do not expect you to be completely pain free after surgery, our goal is for the pain medication to take the edge off and to keep you comfortable.

What Pain should I expect?

- Incisional pain—consistent pain surrounding the surgical site.
- Muscular--pain that comes and goes, may be sharp and spastic in nature.
- You may feel some muscle spasms/tightness surrounding the surgery site and/or radiating into surrounding muscles, or extremities.
 - You can use heat on radiating pain. Do NOT apply heat to the incision.
- **Post operatively, you will likely feel fluctuations of your preoperative pain/numbness/tingling, this is normal as your body is healing.**

The First Days After Your Surgery

- You may or may not have a drain near your incision after your operation. This drain is placed during surgery and helps drain any fluid or blood to prevent hematoma/seroma (post operative fluid collection) and promotes healing.
- You will be wearing special wraps on your calves, called sequential compression device (SCDs), to help decrease the risk of blood clots.
- You will be given an incentive spirometer, which is a breathing exercise device that helps prevent lung infections such as pneumonia.
 - Please perform 10 breaths every hour while awake.
- **Your goal is to start moving and keep moving. You may be at risk of falling immediately after surgery. Do not get out of bed on your own.**
 - Beginning post op day #1, we encourage all our patients to get out of bed with each meal and walk the hall three times a day.
 - Walking can reduce the risk of multiple complications related to surgery as well as reduce your pain.
- Constipation: anesthesia and pain medication will increase your risk for constipation. To help prevent this, you will be given a stool softener, laxative, and chewing gum.
 - We recommend continuing stool softeners and laxatives for constipation post-discharge, as well as increasing your daily oral fluid and dietary fiber intake.
- Anterior Cervical Fusion: It is common to have a sensation of a “lump in the throat” when swallowing following surgery. We recommend eating soft, cold, foods, and taking time to eat and chew your bites.

Physical Therapy

- You may work with physical therapy in the hospital, either day of surgery or within 24 hours. Physical therapy helps you to understand proper body mechanics and how to navigate activity within post op restrictions.
- You may be referred to outpatient physical therapy at your initial follow up appointment with your surgeon.

Post Operative Activity

- No excessive bending/twisting at the waist for 6 weeks.
- Do not lift greater than 10 pounds for 6 weeks.
- Please discuss specific lifting restrictions 6-12 weeks with your surgeon.
- You will need to be cleared by your surgeon to advance any activity.
- Log Roll when getting out of bed.
- Walk at least 10-15 minutes, 3 times a day. Reposition every hour while you are awake.
- Gradually increase walking as able.

Bracing



- Your surgeon may order you to wear a brace post-operatively. Physical therapy will teach you how to properly put this on and take it off.
- If you are wearing a cervical neck brace, please always leave this on unless instructed differently. There may be a specific collar that we can provide for you to shower.
- If you have a back brace (TLSO-as shown on the left), this is to be worn when out of bed with activity. May be removed in bed and showers.
- Bracing is used so stabilize and support your spinal posture. It will also promote healing.
- Please discuss with your surgeon regarding when you can stop wearing your brace.

Discharge Planning

- Discharge readiness will be assessed and evaluated by our multidisciplinary team. You, your surgeon, nursing, physical therapy, and a care coordinator will work together to determine a safe discharge plan.

Steps to discharge

Tolerate foods and liquids
Pain tolerable on oral medications
Walking three times a day
Urinating and passing gas
Drain removed (if applicable)
Safe discharge plan

- There are different discharge options based on your needs:
 - Home self-care: No additional medical assistance needed.
 - Home with Home Health: Home Health PT/Nursing ordered for some additional assistance at home.
 - Acute Rehab Facility: Typically, 7-14 days of additional inpatient therapy. You must be able to complete 3 hours of therapy a day.
 - You will be evaluated by a rehab provider.
 - If you qualify, this will be submitted through your insurance for approval.
 - There is no guarantee that your insurance will approve a rehab stay.
 - Skilled Nursing Facility: If you require a higher level of medical assistance/care, typically longer stay than rehab.
- Durable Medical Equipment:
 - Physical and/or occupational therapy may recommend equipment needed after surgery.
 - If you are needing a walker, this can usually be run through insurance and provided to you in the hospital.
 - You can buy your own toilet risers, grab bars, etc. in preparation for after surgery. These can be found on Amazon or at your local CVS/Walgreens. This is not required.
 - Not all equipment will be covered by insurance.

Discharge from the Hospital

- Please allow time for our team to place discharge orders and complete your discharge paperwork. Discharge typically occurs late morning.
- Nursing will review discharge education with you. Please ask any questions, we want you to fully understand all instructions prior to going home.
- If you have a long drive home, try to break up the ride and take breaks every hour. Get out of the car to walk and stretch your legs.

Discharge Medications

- Your surgeon will prescribe pain medications on the day of discharge. Medications will be sent electronically to your preferred pharmacy.
- Medications can be sent to the Saint Luke's Outpatient pharmacy if you need to pick up medications prior to leaving the hospital.
- Nursing will review new medications with you.
- Some medications may require an authorization from insurance. Our office will be notified and can complete the authorization.
- If you are needing refills after surgery, please contact our clinic. 816-932-2700
 - Keep in mind, medications are not refilled weekends or holidays.
 - We will only provide refills on narcotic pain medication for 4-6 weeks after surgery. Please try to wean off these medications as soon as possible.

Post Operative Wound Care

- You may be discharged home with a drain, please ensure you understand how to care for your drain prior to discharge. If you go home with a drain, DO NOT shower until drain is removed by your surgeon.
- Otherwise, you can remove outer bandage on post op day #3 and shower.
- Do not allow direct water pressure to hit the incision, allow soapy water to roll down your back.
- No scrubbing or applying soaps/lotions directly to the incision.
- Pat dry after showers and leave incision open to air.
- Do not submerge incision in any pools of water (hot tubs, bath, swimming pools) for 6 weeks or cleared by your surgeon.
- **Monitor for infection—redness, swelling, purulent drainage, warmth, fevers, aches.**
- If your incision was closed with external sutures/staples, they will be removed 2 weeks postop.

Frequently Asked Questions

Q: Do I need to contact my insurance company and tell them about my surgery?

A: Our office will work with your insurance company to obtain pre-authorization for your surgery, but it is recommended that you call to understand your benefits, deductibles, how much they will pay, etc.

Q: My surgery is scheduled but I am in a lot of pain. Will my surgeon prescribe pain medications prior to surgery?

A: Our physicians typically do not prescribe pain medication prior to surgery. Please contact your primary care provider.

Q: I am only a few days out from surgery, and I am still experiencing pain. Is this normal?

A: Yes, it can take up to 12 weeks to recover. However, if you notice your pain is not controlled with pain medication or the pain is getting increasingly worse, please contact our office.

Q: My incision is swollen, is this normal?

A: You can expect some mild swelling and redness around the incision after surgery. You can use ice packs on the incision. If you notice any green or yellow drainage coming from the incision, if the incision is hot to touch, or you have a fever, contact our office immediately.

Q: What are my restrictions following surgery?

A: You will have bending, lifting, and twisting restrictions after surgery. Do not lift more than 10 pounds the first 6 weeks after surgery. Do not excessively bend/twist for 12 weeks. Please discuss with your surgeon for specific restrictions.

Q: Can I drive after surgery?

A: Your surgeon will let you know when it is safe to drive again. You cannot drive while taking narcotic pain medication.

Q: When Can I return to work?

A: Returning to work will depend on the type of surgery you have as well as the type of work that you do. Discuss specific work activities with your surgeon. You will be required to be off narcotic pain medication prior to returning to work.

Q: When can I restart my vitamins/supplements, blood thinners, NSAIDS after surgery?

A: vitamins and supplements can be restarted day after surgery

NSAIDS—if you had any type of spinal fusion, please hold NSAIDs for 6 months after surgery, these medications can delay bone regrowth and lead to fusion failure. If your surgeon did not place any hardware—you can restart NSAIDs 72 hours after surgery.

Blood thinners—Please discuss with your surgeon when to restart blood thinners after surgery.

Q: Can I have chiropractic treatments before or after surgery?

A: Chiropractic treatments are typically not recommended, but please consult with your surgeon.

Q: Are the materials, components, or implants used during surgery MRI compatible?

A: In most cases, surgical staples, clips, plates, pins, screws are MRI compatible. They are usually made of titanium.

Q: Will my spinal surgery hardware set off the metal detectors at the airport?

A: No, this is unlikely as most spinal implants are made of titanium.

Q: When should I call the Neurosurgery clinic after surgery?

A: If you notice any signs of infection: redness, swelling, yellow drainage, warmth at the incision site, fevers, please contact our office immediately.

You can send a picture into the patient portal for nursing and your surgeon to review.

For general questions, call our clinic (816-932-2700) and follow the phone tree to speak with your surgeon's nurse.

For emergencies, please go to your nearest Emergency Department.

Notes

Write down any questions you may have for your surgeon and care team.

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Follow up Appointments

You will find scheduled follow up appointments on your discharge paperwork. Your surgeon may order an x-ray for you to complete prior to your appointment as well. Please call our office if you do not have a follow up appointment scheduled.

We are invested in your health and success throughout this surgery process! We know the thought of Spine Surgery can be nerve-wracking and stressful. Understanding what to expect and what to plan for after surgery can help reduce stress and lead to a successful recovery.

Please reach out if you or your family have any questions or concerns before, during, or after surgery.

Neurosurgery Clinic: 816-932-2700

Spine Nurse Navigator: 816-932-9869

You can also contact us through the patient portal for non-urgent needs.

