

# **Minimally Invasive Outpatient Spine Surgery: A Patient and Caregiver Guide**

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- The thought of having spine surgery can be a stressful process.
- Our goal is to help you feel comfortable and informed.
- With this booklet, you can begin prepare for the experience and put your mind at ease.

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# CONTACT INFORMATION

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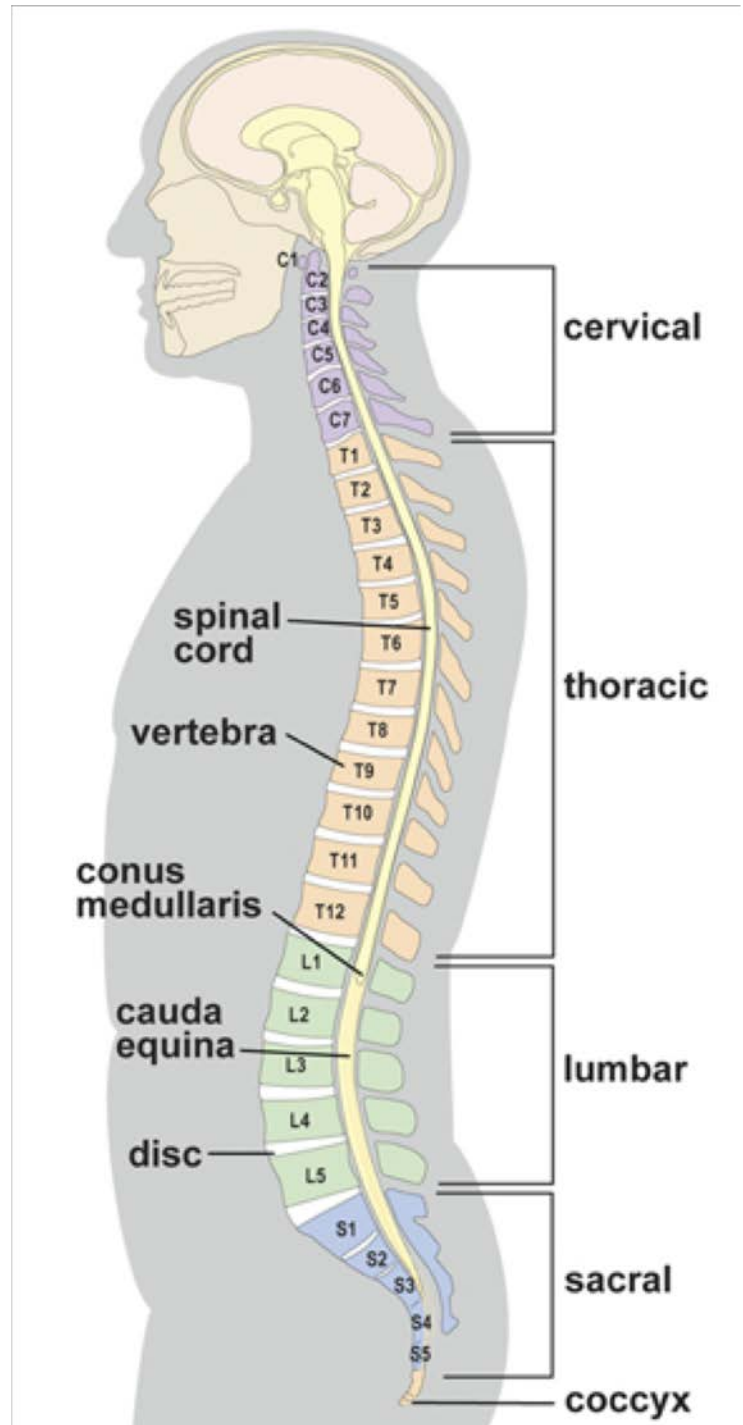
# The Spine

## Your vertebrae and discs

- The spine is made up of 33 bones, or vertebrae, that are interconnected.
- Various muscles and ligaments attach to and stabilize the spine.
- Discs lie between the vertebral bodies and act as a cushion. Discs are made of an outer ring with a gel-filled center.

## Your vertebrae are divided into three regions plus the sacrum and tailbone:

- **Cervical:** 7 bones in your neck make up the cervical spine.
- **Thoracic:** 12 thoracic bones make up your upper back.
- **Lumbar:** 5 lumbar bones make up your lower back.
- **Sacral and Coccyx (Tailbone):** 9 bones make up your sacrum and tailbone.





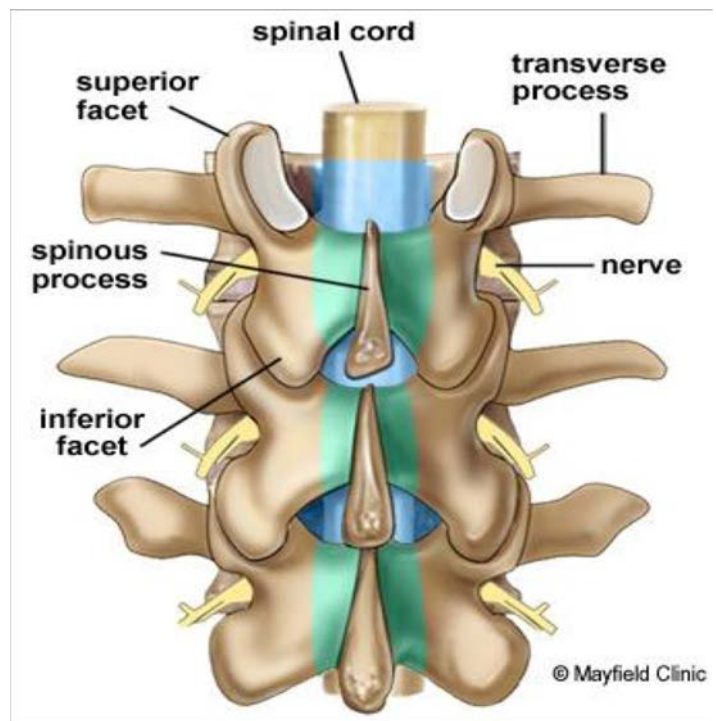
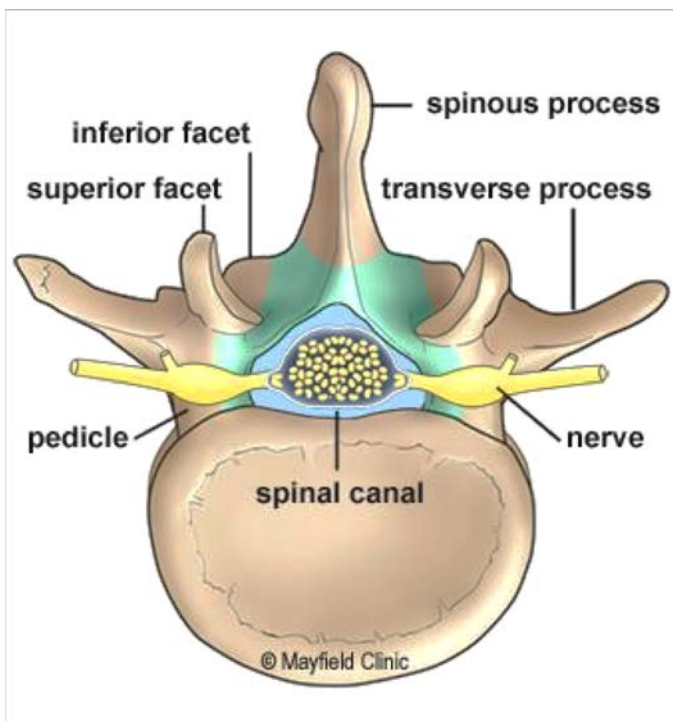
# The Spine

## ***The Spinal Canal and Spinal Cord***

- Each vertebra has a large opening in its center called the spinal canal.
- The spinal cord passes through this large opening and runs from the brain to the lumbar spine.
- The spinal cord carries motor information from your brain down to your body.

## ***The Spinal Nerve Root, Spinal Nerves and the Foramen***

- The spinal nerve root is where the spinal nerves branch off of the spinal cord.
- The spinal nerves then pass through small openings of the vertebrae called foramen.
- The nerves connect to muscles and skin that allow for movement and sensation.





# Common Causes of Neck and Back Problems

## Causes of back and spine ailments:

- Poor posture
- Poor body mechanics
- Obesity
- Genetics
- Smoking
- Diabetes
- Trauma

## Degenerative Disc Disease (DDD):

- This condition occurs when the disc wears down from either the natural process of aging or from injury to the back.

## Herniated disc:

- This happens when the center of the disc ruptures and bulges through the outside of the disc.
- This can cause pressure on the nearby nerve root and spinal nerve to produce pain, numbness, and tingling.

## Spinal stenosis:

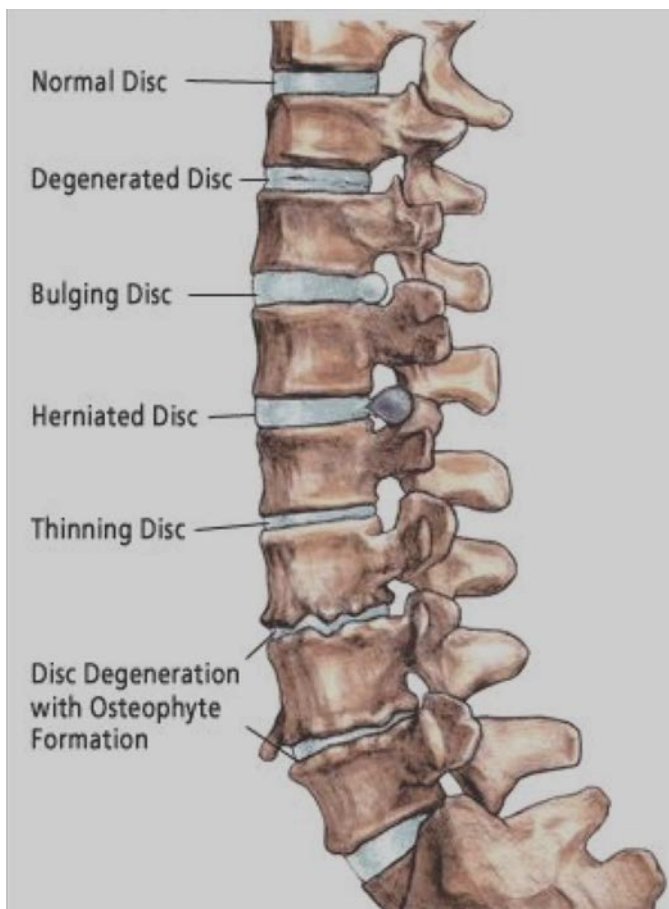
- Narrowing of the spinal canal (bone spurs) which can put pressure on the spinal nerves or compress the spinal cord itself, causing weakness, numbness, and/or pain.

## Radiculopathy:

- Compression or pinching of the nerve root causing pain, numbness, and weakness in the arms or legs.

## Spondylolisthesis:

- Degeneration or trauma to the joints of the spine causing the vertebrae to slip forward resulting in pinched nerves that cause pain.





# Common Surgical Procedures

## **Microdiscectomy:**

The removal of a portion of the disc which is causing pressure on the nerves and/or spinal cord. This procedure can be thought of as shaving down the bulging disc.

## **Microscopic Laminectomy:**

A surgical procedure where bone spurs are removed in order to expand the opening of the spinal canal. This procedure will relieve pressure on the nerves and spinal cord caused by spinal stenosis. This is often done in conjunction with a microdiscectomy.

## **Microscopic Anterior Cervical Discectomy and Fusion (ACDF):**

The most common cervical fusion surgery where the entire disc is removed (discectomy) and stabilized with a fusion. The incision is made in the front of the neck.

## **Microscopic Cervical Total Disc Replacement (TDR):**

This is the same procedure as the ACDF except a synthetic disc is placed into the neck avoiding the need for a fusion.

## **Microscopic Posterior Cervical Laminoplasty:**

A surgical procedure to treat multiple level spinal stenosis causing spinal cord compression. This procedure is motion preserving and does not require a fusion. The incision is made on the back of the neck.

## **Minimally Invasive Lumbar Fusion**

A surgical procedure to make two or more of the bones in the spinal column (vertebrae) grow together (fuse) into one solid bone. This procedure can be done minimally invasively from the side (XLIF), the front (ALIF) or the back (TLIF) of the lumbar spine.



# Planning for Your Surgery

## Smoking / Tobacco Cessation

- **Nicotine prevents bone from healing.**
- New bone growth following surgery is very important for patients undergoing spinal fusions.
- **Patients who smoke, or use nicotine products, also have a higher risk of developing an infection after surgery.**

## Medications

- **Your surgeon will tell you which medications you should and should not take before surgery.**
- Ask your doctor when you should stop taking aspirin, ibuprofen, and other blood thinners. These are typically stopped two weeks before surgery.
- Make sure your doctor knows all vitamins and supplements you are taking and include them on your medication list.
- Please bring a detailed list of your medications with you to the hospital.
- It is important your doctor knows the dose and frequency of all pain medications you are taking at home so we can adequately control your pain after surgery.
- Do NOT bring your actual medications to the hospital as they may get misplaced.



# What to Expect: Surgery Checklist

## Night before surgery:

- **If you have not been called by the preoperative team by 4 p.m. the day before your surgery, please call us at (312) 432-2373.**
- Our office will be able to confirm your arrival and surgical times.
- Shower either the night before or the morning of surgery with antibacterial soap.
- Change your bed linens so that they are clean when you return home.
- Eat a normal dinner.
- Do NOT drink alcohol.
- **Do NOT eat or drink anything after midnight unless otherwise instructed by your doctor.**

## Morning of surgery:

- Your doctor will advise you which medications you should and should not take the day of surgery.
- Do NOT chew gum or suck on hard candy.

## Packing for the hospital:

- Comfortable, loose-fitting clothes. Socks and shoes that are easy to put on.
- Please bring your dentures and their case – your family will need to keep these.
- Please bring your glasses and hearing aids if applicable.
- Please bring your CPAP mask if you use one at home (bring your settings).
- Medication list including dosage and frequency.
- Insurance card and ID.
- Cell phone and charger.

## Do NOT bring:

- Cash
- Jewelry
- Valuables
- Medications



# What to Expect: Before the Surgery

## Preoperative care:

- Your surgical team includes: your Surgeon, Anesthesiologist, Physician assistant, Nurses, Operating room technicians and any medical personnel who will be assisting during your surgery.
- Your surgical consent will be re-reviewed with you.
- Your surgical site will be marked.
- Anesthesia consent will be reviewed and signed.
- We will ask you to change into a hospital gown and place an armband on your wrist.
- We will ask you for your name and birth date regularly.
- We will place compression stockings on your legs to prevent blood clots.
- We will identify where your family will be and who will notify them when surgery is over.
- Your family can wait in the surgical waiting room until you are out of the operating room.



# What to Expect: Pain Management

## Postoperative Pain

- **Our goal is to reduce your pain** so that you can work with physical and occupational therapy and regain your mobility and independence.
- Postoperative pain is different from your preoperative pain and can be related to your incision, swelling, and muscle tension.
- Muscular pain and pain related to swelling can be relieved by early walking, gentle range-of-motion exercises, applying heat or cold packs, and/or taking muscle relaxers.

## Narcotic medications

- We use a highly sophisticated minimal narcotic anesthesia protocol developed by our team.
- The MMA (Multi-Modal Analgesia) protocol is a combination of pain medications that work together to provide greater pain relief than narcotics alone while limiting side effects.

## Narcotic Side Effects

- Constipation:
  - Take scheduled stool softeners such as Colace as long as you are taking pain medicine.
  - Drink plenty of water.
  - Eat high fiber fruits and vegetables.
- Shallow breathing:
  - Use your Incentive Spirometer as instructed by your nurse to prevent pneumonia.
- Nausea:
  - Take oral medications with food.
  - Eat bland foods at rest and avoid spicy or heavy foods.
- Itching:
  - Medications like Benadryl can help relieve itching. If this doesn't work, we may need to adjust your medications.
- Sleepiness:
  - If you become too drowsy with pain medications, we will need to adjust the amount of medication you are taking.



# What to Expect: Pain Management

**Please note that medications are ordered on an individual basis and not everyone will be prescribed all types of medications. These may include:**

- Muscle relaxers such as Flexeril, Zanaflex or Valium.
- Medications for nerve pain such as Lyrica or Neurontin. If you were on these before surgery, we may slowly decrease your dose after surgery.
- Tylenol or acetaminophen. You should not take more than 3,000 mg of acetaminophen per day.

**NOTE: We typically avoid ibuprofen or other nonsteroidal, anti-inflammatory medications (NSAIDs) because they may increase bleeding and can prevent bone fusion from occurring.**

**Other treatments that can treat pain and help you cope with your discomfort:**

- Repositioning and early ambulation can help prevent muscle spasms.
- Ice can help decrease postoperative swelling and should be used for 20 minutes on and 20 minutes off.
- Relaxation techniques such as deep breathing, meditation and imagery can be helpful.
- You may also experience a sore throat following surgery. Drinking water and using throat lozenges may help with this.
- Distraction techniques such as listening to music or watching TV can help take your mind off of your pain.



# What to Expect: After the Surgery

## Early walking/mobilization:

- Unless otherwise instructed by your doctor, you will be walking the day of your surgery.
- Walking is important to prevent blood clots and pneumonia.

## Bowel function:

- Many patients experience constipation after spine surgery and when taking narcotics.
- It is very important to drink plenty of fluids, take stool softeners and laxatives as needed, eat plenty of fruits and vegetables, and to get out of bed as soon as you can.
- To prevent constipation, stool softeners, such as Colace or Senokot, may be taken twice daily. Miralax may also be added as needed once daily.

## General Rules:

- Walking is encouraged daily and climb stairs as needed.
- 10 pound lifting limit until seen in our office for follow-up.
- You may sleep on your back/side whatever is most comfortable for you.
- No sexual activity for 2 weeks.
- No driving for 2 weeks.
- Do NOT drive while on pain medication or muscle relaxants.
- Physical therapy will be arranged at the first follow-up appointment.
- Swallowing difficulty after neck surgery is normal.
- **No neck or back brace is needed.**
- **Smoking is discouraged even after surgery because it prevents healing.**



# Frequently Asked Questions

## **Will I set off metal detectors?**

- Most patients do not have a problem with this. Very occasionally, when the security wand is waved over the location of hardware, an alarm may result. Then the surgical scar will have to be shown.

## **When can I return to work?**

- This is very individualized to you and the type of work you do. Discuss this with your surgeon. In general, most patients require some time off work depending on the type of surgery and the amount of lifting required with the job.

## **When will I begin outpatient physical therapy after surgery?**

- The best activity for your back is walking both before and after surgery. After your surgery, you should gradually increase the time and distance you walk. As you heal, your surgeon will order physical therapy after surgery only if it is needed.

## **How long before I can travel?**

- Traveling will depend on your ability to sit for an extended period of time and how much movement is required in your travel plans. We encourage you to not sit longer than two hours at a time without getting up and moving around.

## **When should I call my doctor?**

- Temperature above 101.0 degrees.
- Clear or excessive drainage from the incision.
- Increase in pain.
- Difficulty urinating or having bowel movements.



## A black silhouette of the Chicago skyline against a light gray background. The Willis Tower is the tallest building in the center. Other prominent buildings include the Trump Tower to its left and the Aon Center to its right. The skyline is set against a solid light gray background.

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