ORTHOINDY
BONE·JOINT·SPINE·MUSCLE

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Lumbar Microsurgery Guide

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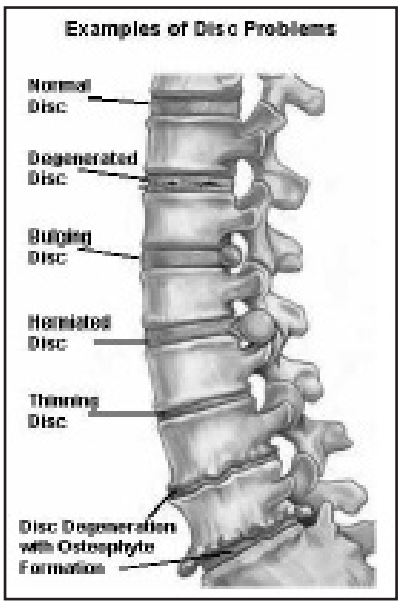
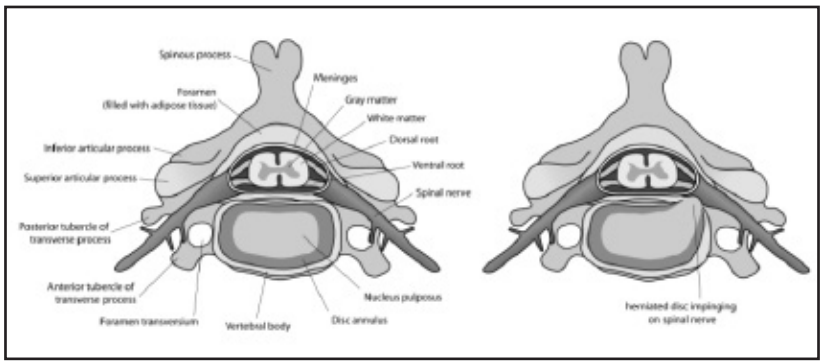
The Lumbar Spine



You are being scheduled for surgery on your lumbar spine. Dr. O'Neill has determined the type of procedure that is necessary for you after reviewing your symptoms, your physical assessment, your X-rays and other studies that you have had completed.

The bones in the lumbar spine are called vertebrae. There are five vertebrae in the lumbar spine. Each vertebrae in the lumbar spine are cushioned by an elastic type shock absorber known as the disc. The discs have a soft center, known as the nucleus, which is surrounded by a tough outer ring, known as the annulus. The discs allow the motion between the vertebrae. The discs, bony structures, ligaments and strong muscles all work together to stabilize the spine. The spinal cord, which is the nerve center of the body, connects the brain to the rest of the body, and usually ends at approximately L1 or L2. Beyond that, nerve roots are present in a fluid-filled tube. The outer layer of this tube is called the dura. At each segment, nerve roots exit/enter the spinal canal on each side (left and right).

Compression or squeezing on the nerves in the spinal cord or nerve roots may be causing the different types of symptoms you may be experiencing. These symptoms may include back pain, leg pain, weakness in the legs, numbness in the legs. Other more serious symptoms include problems with bowel or bladder function.

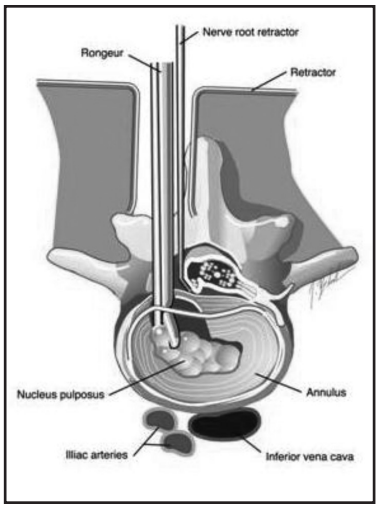


The compression of the nerves can be caused by some of the following conditions:

1. **Degenerative Disc Disease:** Degenerative disc disease is a process referring to the disc aging and losing its ability to work as a cushion. During the aging process, or degeneration, the disc loses its elasticity, which can cause the disc to crack, flatten or eventually turn into bone. As the disc flattens, the bone (vertebrae) rub together which can then cause **bone spurs**. These bone spurs can cause pressure on the nerves.
2. **Herniated Disc:** The disc is the cushion between the vertebrae. The inside of the disc, known as the nucleus, is made up of mostly water. A disc herniation refers to the outer part of the disc, known as the annulus, tearing, thus allowing the soft watery material on the inside of the disc to come out of the disc. The disc herniation can then cause pressure on the spinal nerves and/or the spinal cord.
3. **Bulging Disc:** A bulging disc refers to the soft inner part of the disc remaining in the annulus that it is no longer in its proper place. The bulging disc can cause pressure on the nerves and/or the spinal cord.
4. **Spinal Stenosis:** Spinal stenosis is where bone spurs narrow in the space through which the nerve roots exists in the spinal canal.
5. **Spondylosis:** Spondylosis is the degenerative arthritis of the spine. The arthritis can cause pressure on the nerve roots.
6. **Radiculopathy:** A disease process referring to the pressure on the nerve root.
7. **Myelopathy:** A disease process referring to pressure or compression on the spinal cord.

Lumbar Surgery

The lumbar surgery that has been scheduled for you is to correct the problems that you have been experiencing in your back and leg(s). Dr. O'Neill has discussed with you the possible surgeries that may assist in helping correct your problems. He has elected to perform the one of the following minimally invasive surgeries for you:



1. **Lumbar Microdiscectomy:** This involves removing the bone over the spinal canal, retracting the nerves out of the way, and taking out part of the disc that is causing compression on the nerve(s).
2. **Lumbar Microdecompression:** This is similar to a microdiscectomy, except that no disc material is removed. The compression on the nerve is relieved by removing bone.
3. **Incision:** The incision is made vertically along your back directly over the level needing work. The incision is approximately one inch long, but can vary depending on each case.
4. **Blood Loss:** It is an unusual occurrence for you to need blood during any of the procedures that have been discussed. Blood loss is usually about half cup during these types of surgical procedures.
5. **Expected Pain:** You will have some pain from surgery. We inject local anesthetic to minimize this, but you will have some soreness at the incision site. Fortunately, this pain eventually subsides. You may notice an immediate improvement in your leg pain, while back pain may improve over time.
6. **Risks and Complications:** The list below includes some of the common possible side effects for this surgery. Fortunately, complications are very rare in Dr. O'Neill's practice. Please note that the list below includes some, not all of the possible side effects:
   - Side effects from anesthesia
   - Infection
   - Spinal cord or nerve damage
   - Bleeding

- Blood clots
- Tear in the dura, resulting in spinal fluid (CSF) leak
- Re-herniation of disk material
- Spine instability

Before Surgery

Before your surgery it may be necessary to have a urinalysis and blood work done, an EKG and a chest X-ray. If needed, all of these tests will be scheduled for you and will be done during pre-testing when you meet with the anesthesia staff. If it has been some time since you have seen your primary physician and you have a lot of medical problems, it would be best that you see your medical doctor before your pre-test date.

1. **Preparing for Surgery:** During the four weeks of your recovery you should not be lifting more than **20 pounds**, unless instructed by Dr. O'Neill. Please make arrangements before surgery to have any heavy items purchased before surgery such as dog food, etc.
2. **Length of Stay in the Hospital:** Once you wake up from anesthesia, your medical condition is stable, and your pain is under control with pills, the safest place for you to be is outside of the hospital environment. While nearly all patients go home the same day as their surgery, it is best to prepare to stay overnight, just in case something unusual was to occur.
3. **Day Before Surgery:** Light meals are recommended the day prior to surgery. **Nothing to eat or drink after midnight the night before your surgery.** You can brush your teeth, just do not swallow any water.

Medications to Stop Prior to Surgery

- **Aspirin and blood thinners** (Coumadin, Persantine, etc.) need to be stopped one week prior to surgery. Talk to the ordering physician for instructions on stopping.
- **Non-steroidal anti-inflammatory (NSAID)** medications/arthritis medicines (such as Advil, Aleve, ibuprofen, Motrin, Clinoril, Indocin, Daypro, naprosyn, Celebrex, Vioxx, etc.) should be stopped two weeks before surgery.
- **Tylenol** products are okay to continue.
- Stop the following **herbs** at least two weeks before surgery: Chrondroitin, Danshen, Feverfew, fish oil, garlic tablets, ginger tablets, Ginko, Ginsen, Quilinggao, Vitamin E and Co Q10.
- **Insulin and Prednisone** have specific instructions that may need to be adjusted prior to your surgery. Please let the anesthesiology team know all medications you are on.
- Medications for **blood pressure, heart and breathing** may need to be taken with a small sip of water the morning of surgery. During your pre-operative anesthesia appointment, the anesthesia staff will let you know which of these medications, if any, you should take.

Day of Surgery

On the day of the operation you will be asked to arrive approximately two hours prior to your operation. You will check in and then be taken to a waiting area. Approximately one hour before the operation you will be called to the holding area where you will meet the anesthesiologist. The anesthesia staff will then place catheters in your arms for the intravenous fluids and then will begin to medicate you. The scheduled time of your surgery is really just an approximation. Much depends on when the last case finished. Sometimes we can be off by more than a few hours.

When you finally get to the operating room, you generally will not see Dr. O'Neill, as he is often in a different room finishing up the surgery before your case. The staff working with Dr. O'Neill will assist the anesthesiologists and you will be put under general anesthesia. It is usually 30 to 60 minutes from the time that you enter the room until Dr. O'Neill makes the incision.

At the conclusion of the procedure, it usually takes 30 to 60 minutes to wake you up and put you on the hospital bed before you are taken to the recovery room. At the conclusion of the case, Dr. O'Neill will instruct one of the nurses in the operating room to call down to the family waiting area. Your family will be notified that your surgery is finished.

After Surgery

Dr. O'Neill and/or his team will check on you either in the recovery room or in your room on the evening of your surgery.

1. **Activity:** We will assist you getting out of bed to make sure you are safe to be on your feet, as some patients can get light-headed following anesthesia. You should avoid bending or twisting your back or lifting more than 20 pounds.
2. **Diet:** You will start on a clear liquid diet that will increase to a regular diet as you tolerate it.
3. **Pain Control:** When you are discharged from the recovery room and then discharged to your home, you will be given prescriptions for pain pills that you may have filled on your way home from the hospital. If you have a lot of muscle spasms, rather than taking narcotics, you can take a muscle relaxant such as Valium or Flexeril.
4. **Sleep:** The surgery allows you to have a several hour nap during the day, which may disturb your wake/sleep cycle. Often you are able to get only two to three hours of sleep the night of the operation.

Post-operative Instructions

1. **Wound Care:**
   - If you stay in the hospital overnight, the dressing will be removed the following morning by Dr. O'Neill or his team. If you went home after surgery, you may remove your dressing the morning following surgery. If there is some drainage, place a clean and dry dressing over the incision (gauze and tape). If there is no drainage, you may leave the incision uncovered and open to air without a dressing on.
   - If you have skin glue over your incision site, this will dissolve by itself with time.
   - Please **do not** put any ointments or antimicrobial solutions over the incision or skin glue.
   - **If you notice continued or worsening drainage, significant redness, swelling or increased pain at the incision site, please call the office.**
2. **Showering:**
   - If the incision is no longer draining fluid, you make take a shower after five days from your operation.
   - There is no need to cover the incision.
   - You may use soap and water to clean the incision, then gently dry off the incision and leave it open to air.
   - Please make sure incision is completely dry after showering.
   - **Do not** take a bath or get into a pool for six weeks after surgery or until the incision is closed and well healed.
3. **Medications:**
   - **Narcotics:** Depending on the surgery and the amount of pain you are having, Dr. O'Neill will prescribe pain medications for you. The most common medications are Percocet/Oxycodone,

Norco/Hydrocodone and Tylenol #3. If you need refills on these pain medications, please call five business days in advance to allow time to fill these medications. These cannot be "called in" and need to be given to you on a written script.

- **Stool Softeners:** You should take these while on any narcotics to prevent constipation.
- **Muscle relaxers,** such as Valium or Flexeril, may be given to you as well.
- You may take **anti-inflammatory medications,** including aspirin, ibuprofen (Advil, Motrin) and naproxen (Aleve), as well as any other prescription anti-inflammatories.
- You may take **Tylenol** at any time (no more than 4000 mg of Tylenol in 24 hours).
- If you were taking **aspirin or blood thinners** for a medical condition, such as heart disease, Dr. O'Neill will instruct you on how to proceed. It is generally okay to resume these medications immediately following surgery.
- You may resume all of your other home medications, including vitamins and supplements.

4. **Driving:** No one should operate a motor vehicle while taking narcotics. You should avoid driving during the busy traffic times and remember to carefully position your mirrors before starting to drive.
5. **Recovery of Symptoms:** What to expect regarding your symptoms that were present prior to surgery depends on the cause of the problem:
   - **Radiculopathy Resulting from Nerve Root Compression**: Radiating pain, numbness or tingling or even weakness, may improve immediately after surgery. Occasionally symptoms may temporarily worsen after surgery as a result of nerve manipulation and resulting inflammation, but should resolve over the following few weeks of recovery. In general, the longer symptoms were present before surgery, the longer it takes to recover. Recovery may continue to occur for several months after surgery. We won't know until one year after surgery which symptoms are permanent.
   - **Back Pain:** The worst pain typically lasts for two to four weeks. Thereafter, the pain gradually begins to decrease, but may still persist for at least three to six months. All of this is normal during the healing process.
6. **Activities/Restrictions:**
   - You should walk as much as you can while you are recovering. Dr. O'Neill strongly recommends aerobic walking post-operatively. Similarly, non-impact aerobic exercise is also recommended, such as stationary bikes or elliptical machines.
   - You may ride in a car as long as you are comfortable.
   - You may resume sexual relations when you are comfortable. The safest position for the patient is laying flat in bed.
   - No athletic activities until you have discussed your limitations with Dr. O'Neill at your post-operative checkup.
   - Avoid bending or twisting your back or lifting more than 20 pounds for the first four weeks after surgery. No BLT's (bending, lifting or twisting).
   - You can generally return to moderate duty activities after four weeks and to heavy labor activities after three months.
   - Nicotine or tobacco products can delay your wound from healing.
7. **When to Call:** Please call any of the OrthoIndy offices if you have any questions or concerns. If it is not urgent, please call during normal business hours. Specific things that should prompt you to notify us include:
   - Fever higher than 101 degrees Fahrenheit
   - Severe headaches that are worse when sitting upright, relieved when laying down
   - Wound drainage that is not decreasing
   - Significant redness or swelling around the incision
   - Worsening numbness, tingling or weakness in your arms or legs
8. **Follow-up Appointment:** If a follow-up appointment has not been scheduled for you, please call **317.802.2049** to set up an appointment within a few days of your discharge.