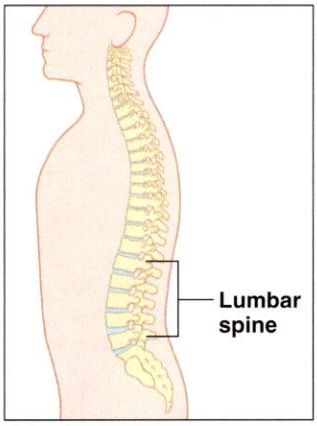
ATLANTA SPINE INSTITUTE

MICRODISKECTOMY INFO

Learning About Low Back Problems

Vertebrae are bones that stack like building blocks to make up your spine. The **lumbar spine** contains the five bottom vertebrae in your back. When the lumbar spine is healthy, you can bend and move in comfort. But if part of the lumbar spine is damaged, pain can result.

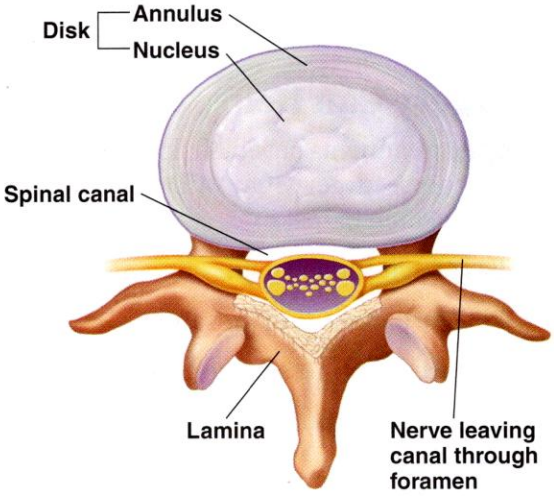


A Healthy Lumbar Spine

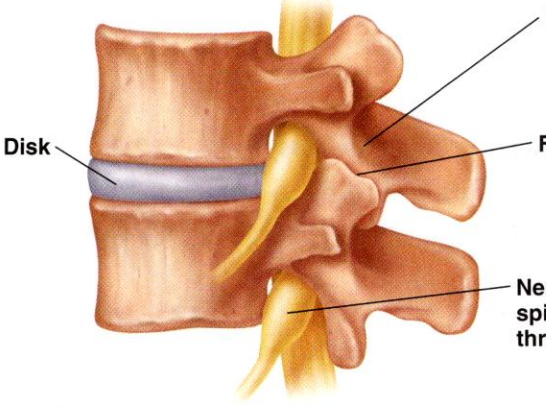
In a healthy lumbar spine, all the parts work together.

- **Disks** are soft pads of tissue that act as shock absorbers between the vertebrae. The firm, fibrous outer layer of a disk is called the **annulus.** The soft center of the disk is called the **nucleus.**
- The **spinal canal** is a tunnel formed within the stacked vertebrae. The opening between the vertebrae on either side of the spinal canal is called the **foramen.**
- **Nerves** run through the spinal canal. They branch out from the spinal canal through the foramen on each side.
- The **lamina** is the arched part of each vertebra that forms the back of the spinal canal. **Facet joints** are the joints where the vertebrae meet.

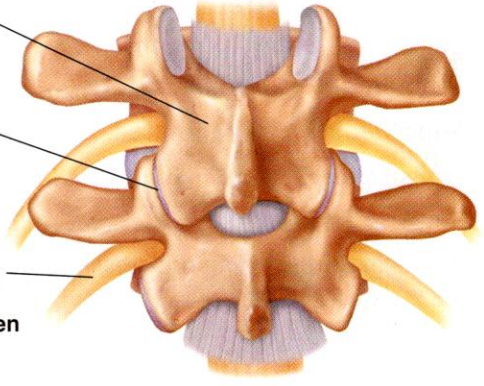
Top view of a vertebra



Side view of two vertebrae



Back view of two vertebrae



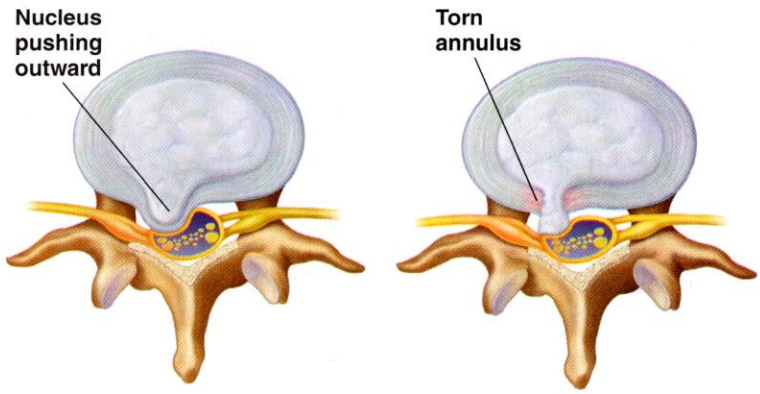
A Painful Lumbar Spine

Low back pain can be caused by problems with any part of the lumbar spine. A disk can **herniate** (push out) and press on a nerve. Vertebrae can rub against each other or slip out of place. This can irritate facet joints and nerves. It can also lead to **stenosis,** a narrowing of the spinal canal or foramen.

Pressure from a Disk

Constant wear and tear on a disk can cause it to weaken and push outward. Part of the disk may then press on nearby nerves. There are two common types of herniated disks:

- **Contained** means the soft nucleus is protruding outward.
- **Extruded** means the firm annulus has torn, letting the soft center squeeze through.

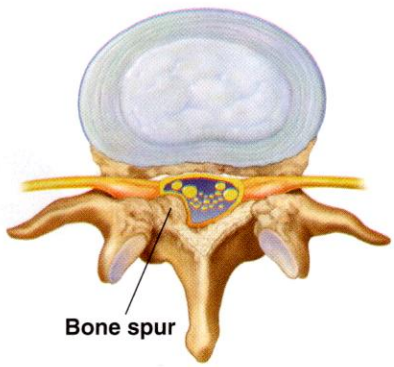


A **contained** herniated disk

An **extruded** herniated disk

Pressure from Bone

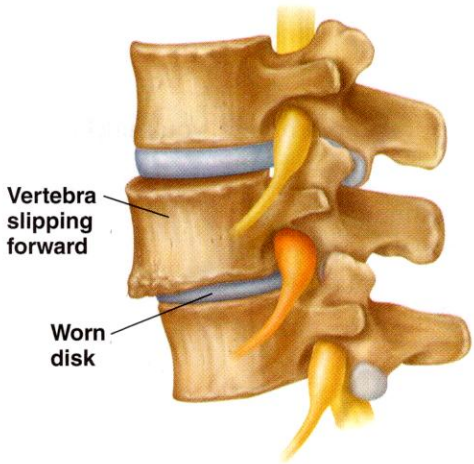
With age, a disk may thin and wear out. Vertebrae above and below the disk may then begin to touch. This can put pressure on nerves. It can also cause **bone spurs** (growths) to form where the bones rub together. Stenosis results when bone spurs narrow the foramen or spinal canal. This also puts pressure on nerves.



Stenosis results when bone spurs narrow a foramen or the spinal canal.

An Unstable Spine

In some cases, vertebrae become unstable and slip forward. This is called **spondylolisthesis.** Slipping vertebrae can irritate nerves and joints. They can also worsen stenosis.



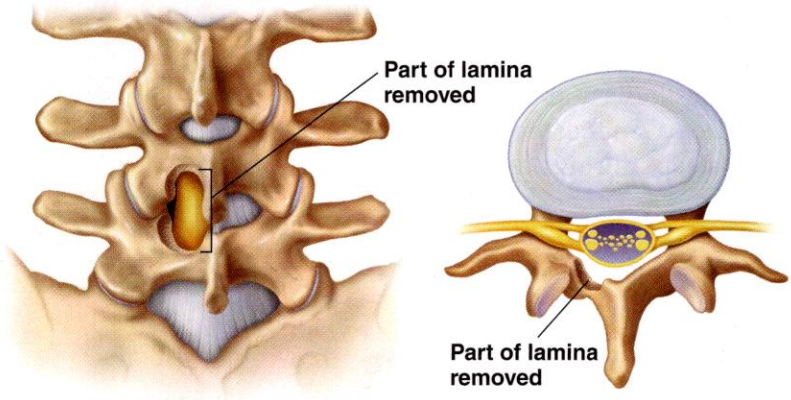
Spondylolisthesis can occur when a worn disk allows the vertebra above it to slip forward.

Types of Surgery: Decompression

Decompression is a type of surgery that takes pressure off a nerve. This can be done by removing bone from vertebrae. It can also be done by removing a portion of a disk. Sometimes, a combination of procedures are used.

❑ Laminotomy

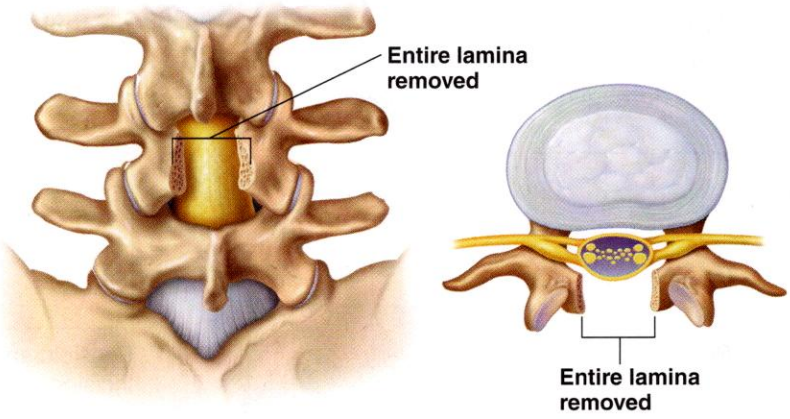
A laminotomy removes a portion of the lamina—the bone at the back of the spinal canal. The small opening that is created is sometimes enough to take pressure off a nerve. But in most cases, part of a disk or a bone spur that is pressing on a nerve is also removed.



View from the back **View from above**

❑ Laminectomy

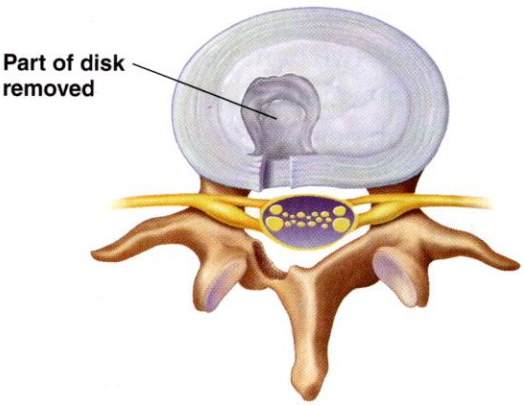
A laminectomy removes the entire lamina. This helps relieve pressure when a disk bulges into a nerve. If needed, your surgeon can also remove any part of a disk or bone spur that presses on a nerve. He or she may also enlarge the foramen to ease pain caused by stenosis. After the procedure, the new opening in the spine is protected by the thick back muscles.



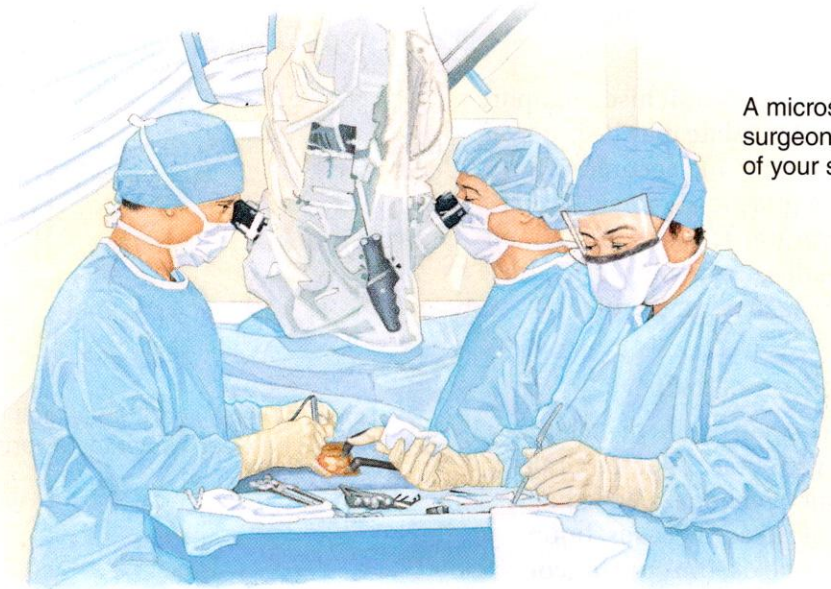
View from the back **View from above**

❑ Diskectomy

A diskectomy removes a portion of a damaged disk. Your surgeon may use a surgical microscope during the procedure **(microdiskectomy).** In most cases, a laminotomy must first be done to expose the disk. Then any part of the disk that presses on a nerve can be removed. Disk matter that is loose or may cause problems in the future is also removed. After surgery, there is usually enough disk remaining to cushion the vertebrae.



View from above



A microscope gives your surgeon a detailed view of your spine.

Risks and Complications of Decompression

Risks and possible complications of decompression surgery include:

- Infection
- Bleeding or blood clots
- Nerve damage
- Spinal fluid leak
- No improvement of pain, or worsened pain
- Need for second surgery
- Paralysis (very rare)

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LUMBAR LAMINECTOMY OR DISCECTOMY

Your doctors have determined that you have an abnormality in your back that may be best treated by an operation and have offered you surgical treatment. A lumbar "laminectomy" is an operation on the spine in the lower part of your back where the doctors open up and unroof a portion of the spine. The most common problems making this surgery necessary are a "ruptured disc" and too much tightness in the spinal canal or in the windows where the nerve roots run out of the spinal canal causing compression or pinching of a nerve(s). This second situation is called "spinal stenosis".

In the case of a ruptured disc, only the ruptured or herniated portion of the disc is removed along with an extra "safety margin". This disc can be thought of as a "jelly filled doughnut". A weakness or a hole in the doughnut allows the jelly to run out, rubbing against, irritating and compressing the nerve or nerves. At surgery, the jelly outside the disc is removed, as well as the jelly plugging up the opening in the doughnut. Some of the jelly, still inside the doughnut, is also removed to lessen the likelihood that the disc can re-rupture". With time, the hole or opening in the doughnut will seal and heal and the jelly removed from inside the disc will be reformed to a varying degree. It is important that you follow the post operative instructions carefully to allow for good strong healing of the hole in the doughnut and the disc in general. The doughnut or disc is left in place to act as a spacer and shock absorber between vertebrae.

COMPLICATIONS AND RESULTS

Complications from this type of surgery are infrequent, but they do occur. It is possible that you will not be any better after having had this surgery. It is even possible that you may be worse after the operation than you are right now. Because of these facts, your doctor can make no guarantees as to the results that might be obtained from this operation. Generally speaking, however, our results have been good or excellent in over 85% of the patients undergoing this type of surgery.

As in any operation, this type of surgery can be complicated by excessive bleeding and infection (1%). These complications can result in the need for blood transfusion, the need

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for further surgery, prolonged illness, increased medical costs, increased pain, suffering and disability and even death (very rare). Infection (such as AIDS or hepatitis) is very rare after receiving a transfusion, but can occur. The great vessels in the abdomen can even be injured during discectomy (very rare), requiring immediate abdominal vascular surgical correction. Injuries to the spinal cord and nerves of the back are uncommon with this kind of surgery, but can occur in about 1% of the cases. This type of complication can result in temporary or permanent weakness of one or more of the muscles in one or both legs, such as "foot drop". Also, pain and numbness in the lower half of the body on one or both sides can result, as well as loss of bladder and bowel control and sexual dysfunction, i.e., loss of the ability to have or maintain as erection in males (very rare). Some patients have continued back problems after this type of surgery. Occasionally, the same problem which made the surgery necessary in the first place can come back. In the case of a ruptured disc, the likelihood for rerupture is probably about 2-3%.

Other complications are possible including spinal fluid leakage which may take a long time to subside or even necessitate the need for further treatment or surgery. It is possible that the disc space may collapse or that the spine may become unstable or may degenerate further with age resulting in a recurrence of back and/or leg pain or a worsening of these conditions if there was little relief of them immediately following surgery. This may require the need for additional surgery in the future (approximately 5-10%).

Other possible problems are impaired function due to limp, foot drop, continued pain or discomfort, increased or different pain, bone infection, numbness or clumsiness in the leg(s), impaired muscle function, and again recurrence or continuation of the condition for which the operation was performed.

It is important to note that certain complications can result in increased cost and time to recover (if ever) with prolonged time off work and resultant economic hardships and possible emotional, marital, or psychological problems.

ALTERNATIVES AND OTHE CONSIDERATIONS

There may be alternatives to this operation available to you such as the use of medications and traction and other techniques. Medications have been developed that can be injected into the disc space to help dissolve the jelly. Equipment is available to aspirate (suck out) disc material, however, the results from these techniques are not as good as the surgery which is being offered to you. These alternative therapies also carry their own risks to those patients in whom lumbar laminectomy or discectomy surgery is indicated. We feel this operation provides the patient with the best chance of successful treatment and a low risk of complications.

It is important that you stop taking any aspirin, aspirin-containing drugs and other aspirin-like (anti-inflammatory) medicine at least 10 days or so prior to surgery. These medications cause increase bleeding at the time of surgery which we would like to avoid. Please call or ask us if you need help with this.

SUMMARY AND ACKNOWLEDGEMENT

The scope of this informational handout may not be complete. Patients have the right to have their questions answered to their satisfaction and in a manner they understand. We want you to understand the risks and alternatives available. It is our purpose to provide you with best medical care possible. If you have any questions or concerns that are not answered, please as for further information so that you can be more comfortable with what is being done for you. After reading this material carefully, please do not hesitate to call us back for any additional questions you may have at 404-352-4500.

I have read this document under quiet conditions at my leisure away from Dr. James' office and have discussed it with those family members I feel should be aware of its contents. I understand its contents and accept the inherent risks in such a major surgery.

WITNESS	SIGNED
DATE	NAME
	DATE

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LUMBAR POSTOPERATIVE PROTOCOL

1. Do not smoke or chew tobacco products, which could greatly decrease your chance of a successful surgery and/or fusion.
2. No bending, lifting, or twisting. (No lifting greater than 10 pounds, i.e., gallon of milk) for the first 6weeks post-operatively.
3. You may sit as often as you like but not longer than 30 minutes at a time in an upright 90-degree chair. Take 10-minute breaks to stand, walk, or lie down. (Please find a chair with lumbar support/armrest and not very low to the ground).
4. Normal household walking. Limit stairs.
5. Exercise: Walk ten (10) minutes a day for first week. Twenty (20) minutes a day for the second week. Thirty (30) minutes a day for the third week. This should be on level ground, i.e., track, mall walking. (THIS IS IN ADDITION TO HOUSEHOLD WALKING).
6. Wear brace when walking any longer other than going to the restroom and returning. However, you do NOT have to wear brace when sitting on a chair with a back support.
7. **DO NOT BECOME CONSTIPATED**!! Use stool softeners, prune juice, etc. If no bowel movement after being home for 24 hours, use a laxative of choice (one bottle of magnesium citrate or Milk of Magnesia. Use Colace 100 mg by mouth twice a day). Can also supplement with Miralax and Citrucel. Drink plenty of water.

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LUMBAR POSTOPERATIVE PROTOCOL (continued)

8. Patient may shower over dressings only if they have on Aquacel dressing or a clear plastic-water resistant dressing (i.e., op-site dressing).
9. No soaking - Coordinate showers with Home Health visits if possible.
10. Aquacel dressing should remain on until first postop visit. The Aquacel dressing can be worn without issue in the shower. If the bandage becomes saturated or comes off, please contact the office for further instruction.
11. Wear compression stockings until re-check in office.
12. **MEDICATIONS**: Continue all antibiotics until all have been taken per the Pharmacy. For the first three (3) months, do not take anti-inflammatory medication such as Ibuprofen, Advil, Aleve, Celebrex, Aspirin, Voltaren, and Zipsor (diclofenac), as it decreases bone growth (SEE LIST).

    *Post-op medication, i.e., narcotics, cannot be phoned into the pharmacy. The prescription MUST be picked up in person or mailed.
13. No flying or driving until re-check in the office. Patient may drive without back brace if the car has a lumbar support. Please wear a seatbelt including shoulder harness and lap belt.
14. Limit time in the car to 30-45 minutes if possible and break trip up if necessary.
15. You can apply ice/cold pack to the surgical site for 20 minutes at a time. NO HEAT!

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LUMBAR POSTOPERATIVE PROTOCOL (continued)

16. Call the Doctor if temperature rises greater than 101.5 degrees F or chills.
17. Notify the Doctor if wound(s) develops purulence (pus), excessive redness, clear drainage, foul odor, or severe postsurgical headaches.
18. CALL FOR FOLLOW-UP APPOINTMENT IMMEDIATELY AFTER DISCHARGE FROM HOSPITAL TO BE SCHEDULED APPROXIMATELY 14 DAYS POSTOP.

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MEDICATIONS TO AVOID 7 DAYS PRIOR TO SURGERY

DO NOT TAKE: CBD PRODUCTS, VITAMIN E, ASPIRIN, OR WEIGHT LOSS PRODUCTS, AS THESE MAY PROLONG BLEEDING TIME.

If you are on COUMADIN, please notify us IMMEDIATELY. You must contact the physician who prescribed this medication. He/She will need to make the decision if you are able to discontinue this medication for surgery. They will then provide our office with written medical clearance.

HERBS TO AVOID:

ECHINACBA	ST. JOHN'S WORT	GINKGO BILOBA
MELATONIN	GRAPE SEED OIL	GARLIC TABLETS
FISH OIL	TUMERIC	GINGER
CAYENNE PEPPER	CASSIA CINNAMON	DONG QUAI
GRAPE LEAF EXTRACT	FEVER FEW	BROMELAIN

ASPIRIN PRODUCTS TO AVOID:

ALKA SELTZER	ANACIN	ASCRIPTIN	BC TABLETS
BUFFERIN	CHERACOL	COPE	CORICIDIN
DARVON COMPOUND	BAYER	FIORINAL	DRISTAN
SOMA COMPOUND	ECOTRIN	EMPIRIN	EXCEDRIN
GOODY'S POWDER	SINE-AID	SINE-OFF	PERCODAN
STENDIN	VANQUISH	TRIAMINICIN	MIDOL

IBUPROFEN PRODUCTS TO AVOID:

ADVIL	MEDIPREN	NUPRIN	ALEVE	RUFFEN	MOTRIN

ANTI-ARTHRITIC PRODUCTS TO AVOID:

VOLTAREN (Diclofenac)	CLINORIL	FELDENE	INDOCIN
NAPROSYN	TOLECTIN	ANAPROX	ORUDIS
DOLOBID	RELAFEN	ANSAID	DAYPRO
BUAZOLIDIN	ORUVAIL	DISCALID	SALFLEX
MONO-GESIC	LODINE (Etodolac)	CATAFLAM	TORODOL
NAPRELAN	CELEBREX	DICLOFENAC	ZIPSOR
MOBIC (Meloxicam)	ARTHROTEC	CHONDROITIN	GLUCOSAMINE

If you have any questions or concerns about these or any other medications you are presently taking, please call 404-252-2422.

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