

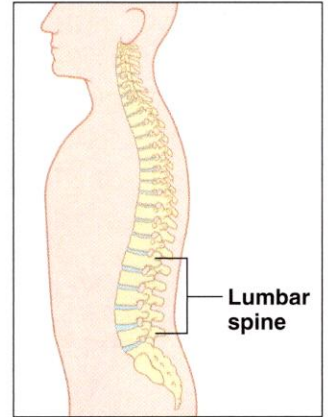


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INFO

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.

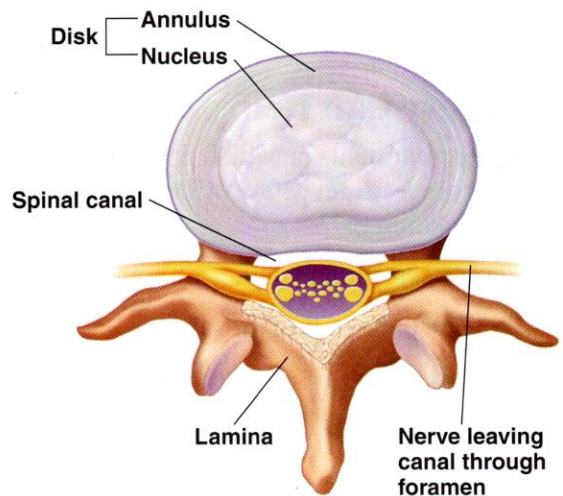


A Healthy Lumbar Spine

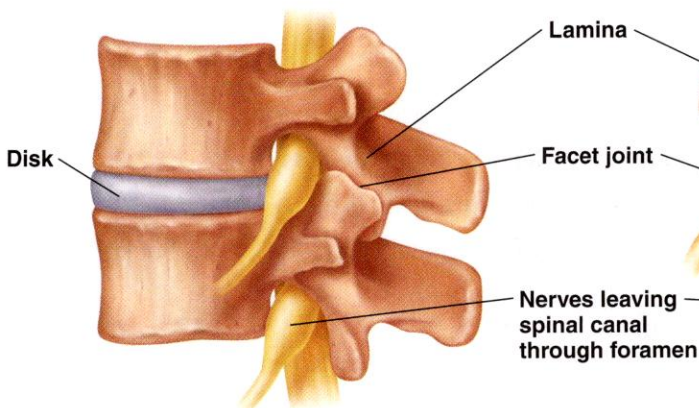
In a healthy lumbar spine, all the parts work together.

- **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.

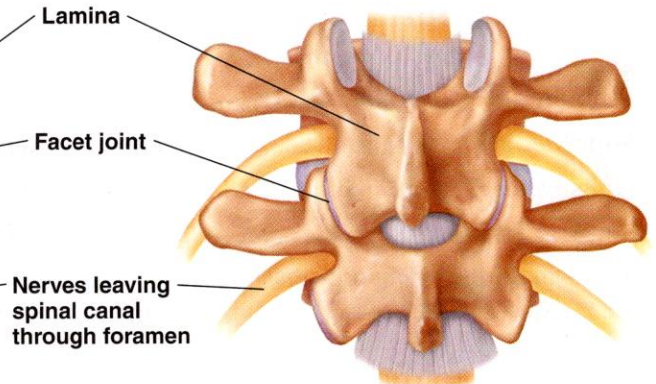
Top view of a vertebra



Side view of two vertebrae



Back view of two vertebrae



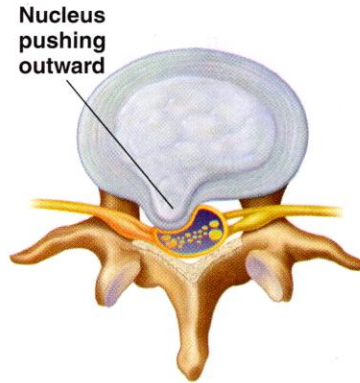
A Painful Lumbar Spine

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.

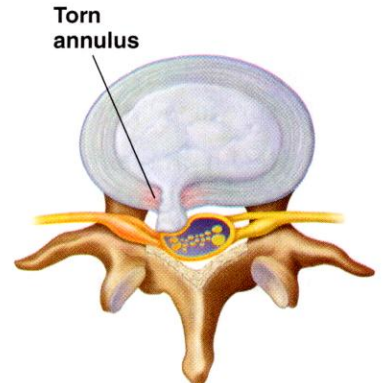
Pressure from a Disk

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.



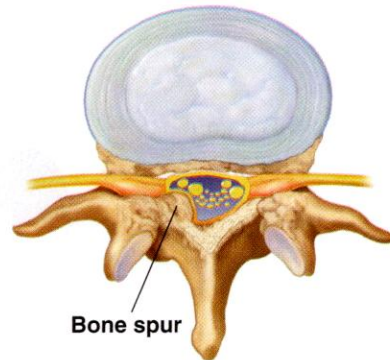
A **contained** herniated disk



An **extruded** herniated disk

Pressure from Bone

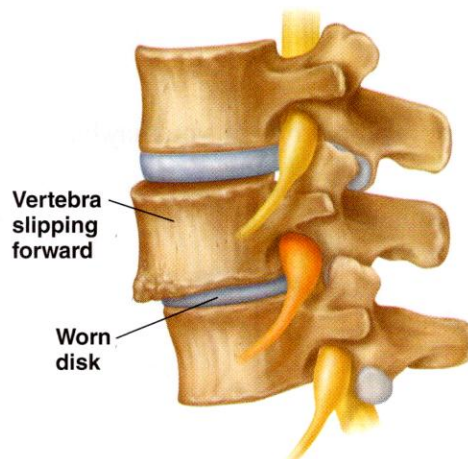
With age, a disk may thin and wear out. Vertebrae above and below the disk may then begin to touch. This can put pressure on nerves. It can also cause **bone spurs** (growths) to form where the bones rub together. Stenosis results when bone spurs narrow the foramen or spinal canal. This also puts pressure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



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

An Unstable Spine

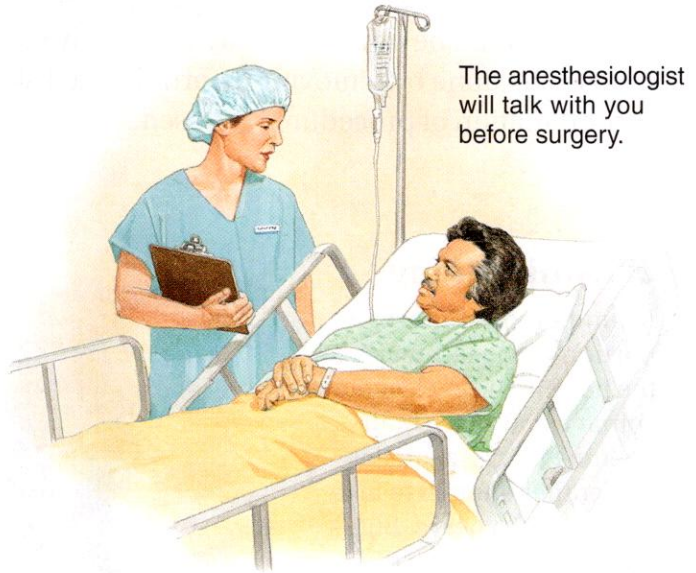
In some cases, vertebrae become unstable and slip forward. This is called **spondylolisthesis**. Slipping vertebrae can irritate nerves and joints. They can also worsen stenosis.



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

The Day of Surgery

Arrive at the hospital on time. Before surgery, your blood pressure and temperature will be taken. You'll be given an intravenous line (IV) to provide fluids. You may also get medication to help you relax. Just before surgery you'll be given **anesthesia** (medication to prevent pain). Local or regional anesthesia numbs just the surgical area. General anesthesia lets you "sleep" during the operation.



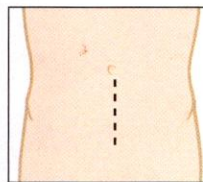
The anesthesiologist will talk with you before surgery.

Reaching Your Spine

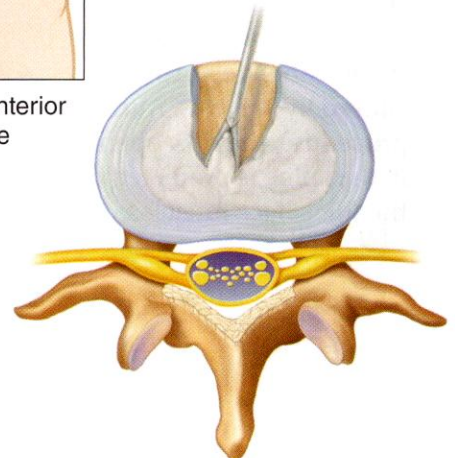
To operate on your spine, the surgeon will make an incision through your skin. The incision will be in your back (**posterior approach**), or in your abdomen (**anterior approach**). After surgery, the incision is closed with stitches or staples.

Anterior Approach

Your surgeon reaches the spine through your abdomen. This is done when your surgeon needs access to the front of your spine.



Possible anterior incision site



Anterior Lumbar Fusion

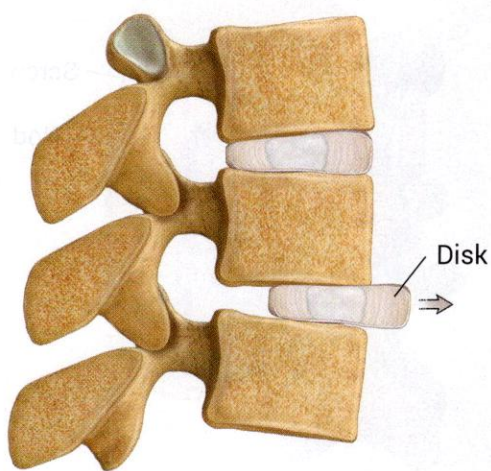
Anterior lumbar fusion may help ease low back and leg pain. For this, 2 or more vertebrae in the low back are fused. This is done through an incision in the front (anterior) of the body.



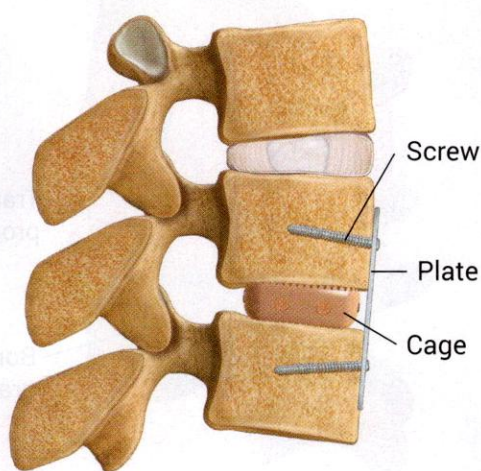
Lumbar vertebrae

The Fusion Procedure

- An incision is made in the abdomen to reach the spine.
- Most of the disk is removed from between the vertebrae.
- Bone graft is placed. It is usually put inside a device called a cage. The cage filled with bone graft is placed in the space between the vertebrae.
- To hold the spine steady as the bone graft fuses with the vertebrae, a metal plate and screws may be added. These typically stay in place and are not removed.
- The incision is closed with sutures, staples, or surgical glue.



The disk is removed from between the vertebrae.



Bone graft inside a cage is placed in the empty space. A metal plate and screws may be used to give extra support.



PLAS T. JAMES, M.D.

DIPLOMATE OF THE AMERICAN BOARD OF ORTHOPAEDIC SURGEONS

NAME: _____ DATE: _____

INFORMED CONSENT FOR ANTERIOR LUMBAR FUSION

PLEASE DO NOT SIGN THIS FORM UNTIL YOU HAVE READ IT AND FULLY UNDERSTAND ITS CONTENTS.

The following has been explained to me in general terms and I understand that:

1. The diagnosis requiring this procedure is BACK PAIN SECONDARY TO INTERNAL DISC DISRUPTION.
2. The nature of this procedure is to OPERATE ON THE BACK THROUGH THE ABDOMEN, REMOVE PAINFUL DISC(S), BONE GRAFT AND FIX WITH SCREWS, PLATES OR RODS AS NEEDED.
3. The purpose of this procedure is to RELIEVE BACK PAIN.
4. The likelihood for success for this procedure is good.
5. Practical alternatives to this procedure include: 1) POSTERIOR SPINE SURGERY (OPERATE ON THE DISC FROM THE BACK) 2) ANTERIOR/POSTERIOR FUSION (OPERATE FROM FRONT AND BACK) 3) PHYSICAL THERAPY 4) EPIDURAL STEROIDS 5) LIVE WITH PAIN.
6. If I choose not to have the above procedure, my prognosis (future medical condition) without fusion will be guarded in that I will probably continue to have pain in the back.

As a result of this procedure, there may be material loss in the form of infection, allergic reaction, disfiguring scar, severe loss of blood, loss of limb or organ, paralysis, paraplegia, quadriplegia, brain damage, cardiac arrest, or death.

In addition to these material risks, there may be other possible risks involved with this procedure including but not limited to: 1) persistent pain 2) spinal fluid leak 3) injury to blood vessels 4) nerve damage which could result in problems such as numbness in legs and/or groin, bowel and/or bladder difficulties (problems urinating or having bowel movement), or sexual dysfunction 5) infection 6) retrograde ejaculation in males 8) bleeding 9) blood clots 10) AIDS if blood bank blood is given 11) fusion does not heal (pseudoarthrosis) which can require further surgery (increased risk in smokers).

I understand that the physician, medical personnel, and other assistants will rely on statements about the patient, the patient's medical history, and other information when determining whether to perform the procedure and/or the courses of treatment.

1 of 2

I understand that the practice of medicine is not an exact science and that NO GUARANTEES OR ASSURANCE HAVE BEEN MADE TO ME concerning the results of this procedure.

I understand that during the course of the procedure described above, it may be necessary or appropriate to perform additional procedures which are unforeseen or not known to be needed at the time this consent is given. I consent to and authorize the persons described herein to make the decisions concerning such procedures and whether they are deemed necessary or appropriate to be performed.

I also consent to diagnostic studies, tests, anesthesia, x-ray examinations, and any other treatment relating to the diagnosis or procedures described herein.

I also consent that any tissues, specimens, organs, or limbs removed from my body in the course of any procedure may be tested or retained for scientific or teaching purposes and then disposed of within the discretion of the physician, facility, or other health care provider.

BY SIGNING THIS FORM, I ACKNOWLEDGE THAT I HAVE READ OR HAD THIS FORM READ AND/OR EXPLAINED TO ME AND I FULLY UNDERSTAND ITS CONTENTS; I HAVE BEEN GIVEN AMPLE OPPORTUNITY TO ASK QUESTIONS AND THAT ANY QUESTIONS HAVE BEEN ANSWERED SATISFACTORILY. ALL BLANKS OR STATEMENTS REQUIRING COMPLETION WERE FILLED IN AND ALL STATEMENTS I DO NOT APPROVE OF WERE STRICKEN BEFORE I SIGNED THIS FORM. I ALSO HAVE RECEIVED ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO THE MATERIALS LISTED BELOW, RELATED TO THE PROCEDURES DESCRIBED HEREIN.

I AM SIGNING THIS FORM ON MY OWN FREE WILL AND UNDER NO DURESS.

I hereby voluntarily request and consent to the performance of the procedure described or referred to herein by PLAS T. JAMES, M.D. and any other physicians or other medical personnel who may be involved in the course of my treatment.

Witness

Person giving consent

Date

Relationship to patient if not patient

Patient unable to sign because: _____

Additional materials used, if any, during the informed consent process for this procedure include:



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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 6 weeks 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 |
| <u>SOMA COMPOUND</u> | 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.