



(470) 293-9800
southernneurosurgery.com

YOUR SURGERY PACKET

Lumbar Interbody Fusion

Patient name: _____

Surgery date: _____

Surgery location: _____

Follow-up appointment: _____

What's in this packet

Part 1 - About Your Surgery: Lumbar Interbody Fusion	pages 2-5
Part 2 - After Your Surgery: Posterior or Lateral Lumbar Fusion	pages 6-10
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Before you go

- Read Part 1 before surgery so you know what to expect.
- Keep Part 2 handy at home. It covers recovery, medicines and when to call us.
- You will also get a separate Surgery Day Guide for the hospital or surgery center where your operation is scheduled. It has arrival and parking details.
- Have a question after surgery? Our Virtual Assistant answers 24/7 (see Part 3).
- Bring this packet to your appointments and write down your questions.

Questions? Our Virtual Assistant is available 24/7:
md-aid.com/c/southernneurosurgery · or call (470) 293-9800

For chest pain or trouble breathing, call 911 or go to the nearest ER.

ABOUT YOUR SURGERY

Lumbar Fusion (Lumbar Interbody Fusion)

When a segment of the lower back is unstable, slipping or worn out and causing pain, a lumbar fusion can often correct the problem by making that segment solid and stable again.

What Is a Lumbar Fusion?

A lumbar fusion is a surgery that permanently joins two or more vertebrae in the lower back so they heal into one solid bone. Stopping motion at a painful or unstable level can relieve back pain, take pressure off pinched nerves and restore the spine's alignment.

Most lumbar fusions today are interbody fusions. The damaged disc between two vertebrae is removed and replaced with a spacer (also called a cage) filled with bone graft. The spacer restores the normal height of the disc space, which opens up the nerve passages, and the bone graft grows through it to fuse the vertebrae together. Screws and rods are usually added to hold everything steady while the bone heals.

The different approaches: PLIF, TLIF, ALIF and LLIF

- **TLIF (transforaminal lumbar interbody fusion):** through the back, reaching the disc from one side through the opening where the nerve exits. It is often done with minimally invasive techniques.
- **PLIF (posterior lumbar interbody fusion):** through the back, reaching the disc from both sides of the spinal canal. It is useful when both sides need decompression.
- **ALIF (anterior lumbar interbody fusion):** through a small incision in the lower abdomen. It allows a large spacer, excellent restoration of disc height and alignment, and leaves the back muscles untouched. It is often used at L4-L5 and L5-S1.
- **LLIF (lateral lumbar interbody fusion):** through a small incision on the side of the body, passing through the psoas muscle to reach the disc. It is well suited to the upper and middle lumbar levels and to correcting curves.

Some patients need a combination, such as an ALIF or LLIF from the front or side followed by screws placed through small incisions in the back.

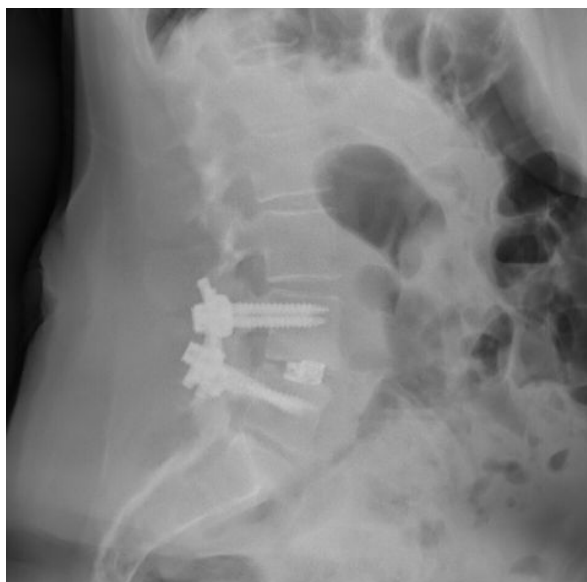


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Who Needs a Lumbar Fusion?

- Spondylolisthesis, where one vertebra slips forward over another
- Spinal instability or a level that moves abnormally on flexion and extension X-rays
- Spinal stenosis combined with slipping or instability
- Severe degenerative disc disease or a collapsed disc causing back and leg pain, when disc replacement isn't an option
- A recurrent disc herniation at the same level, or adjacent segment disease above or below a previous fusion
- Deformity such as scoliosis, or fractures, tumors or infection that have weakened the spine

A worn disc on an MRI alone doesn't mean you need a fusion. Dr. Grunch makes sure your imaging matches your symptoms, and she also offers lumbar disc replacement and decompression without fusion when those are better choices.

How a Lumbar Fusion Is Done

- **Anesthesia and monitoring:** You'll be fully asleep. Nerve monitoring is used to protect the nerves during surgery.
- **Reaching the spine:** Depending on the approach, through the back, the side or the front of the abdomen.
- **Decompression:** Bone, ligament and disc material pressing on the nerves are removed.
- **Preparing the disc space:** The disc is removed and the bone surfaces are prepared so they can fuse.
- **Placing the spacer:** A spacer filled with bone graft is placed to restore disc height and alignment.
- **Stabilizing:** Screws and rods are placed, often through small incisions with image guidance, to hold the level steady.
- **Closing:** The incisions are closed with dissolvable stitches and skin glue.

Benefits and Risks

Benefits

- Relief of back and leg pain from instability, slipping or a collapsed disc
- Restored disc height and more room for the nerves
- A stable spine and improved alignment
- A well-studied surgery with reliable long-term results for the right patients

Risks

- Infection or bleeding
- The bones not fusing (nonunion), which is more common in people who smoke
- Screw or spacer loosening, which can require another surgery
- Extra wear at the levels above or below the fusion over time (adjacent segment disease)
- Nerve injury or a spinal fluid leak, which are uncommon
- Approach-specific risks, such as blood vessel injury with ALIF or temporary thigh numbness or weakness with LLIF
- Risks related to anesthesia, including blood clots

What to Expect

Before surgery

You'll meet with Dr. Grunch or one of her physician assistants to review your imaging, your exam and your goals, and to decide together whether a lumbar fusion is right for you. Our team will coordinate any pre-operative testing, review your medications (including blood thinners you may need to pause) and walk you through the day of surgery so nothing is a surprise. Smoking and nicotine slow bone healing and can cause a fusion to fail, so stopping before surgery is strongly recommended. Our office can help.

Procedure day

Surgery usually takes two to four hours, depending on the approach and the number of levels. Most patients stay in the hospital for one to three nights, often less with minimally invasive techniques. You'll be up and walking by the day after surgery, and physical therapy will help you get moving safely before you go home.

Recovery timeline

- **First two weeks:** Leg pain often improves quickly. Back soreness is normal. Walk several times a day and wear your brace when you're up.
- **Four to six weeks:** Your follow-up visit, with X-rays to check healing. Many people with desk jobs return to work in three to six weeks.
- **Six to twelve weeks:** Restrictions are gradually lifted, and physical therapy may begin to strengthen your core.
- **Six to twelve months:** The bones continue to fuse. Most patients are back to their normal activities. Every patient heals differently. Your exact timeline will depend on your symptoms, the number of levels fused, your job and your overall health.

Your post-operative guidelines explain how to care for yourself at home, and when to call our office.

Questions after surgery? Our Virtual Assistant answers common questions 24/7 at md-aid.com/c/southernneurosurgery, or call our office at (470) 293-9800. For chest pain or trouble breathing, call 911.

This sheet is for educational purposes only and is not medical advice. It does not replace individualized care from a licensed physician. Always follow the instructions Dr. Grunch and her team give you.

AFTER YOUR SURGERY

Postoperative Guidelines for a Posterior or Lateral Lumbar Fusion

Incision care

- Your incision is closed with sutures (also called “stitches”) on the inside of your skin. These are absorbed over time by your body. The outside of your skin is closed with a skin glue. The skin glue will eventually come off in its own time.
- Sometimes patients may need sutures or staples on the outside of their skin. If you have sutures on the outside, these will be removed at your follow up appointment (in 10-14 days).
- You may take a shower the day after surgery if your incision is closed with skin glue. If your incision is closed with sutures or staples, you may take a shower in 3 days. Do not scrub your wound, but gently cleanse it and pat dry.
- Do not submerge into water or a tub for 6 weeks.
- Leave the wound open to dry unless otherwise directed.
- It is normal to have a small amount of brown to reddish colored ooze for a few days.
- Do not apply ointments or creams to the incision.
- We recommend wearing a back brace when out of bed and moving around.
- Some patients may also need a bone growth stimulator. If so, the company will contact you after your surgery. If you have questions about this, please contact our office.

Hospital Expectations after Surgery

- You will start on a liquid diet after your surgery. This is because it is very important for the bowels to wake up after this surgery to avoid an ileus.
- An ileus is an absence of movement in the bowels which leads to a buildup of gas. This requires treatment with medicines and diet control.
- It is important to participate in physical therapy and walk while in the hospital because this helps your bowels to wake up and move normally.
- After you have a successful bowel movement, we will advance your diet.

Pain Expectations

- It is normal to expect pain after back surgery. That is why we prescribe medication to ease you through the healing process.
- After surgery, common pain areas are in the low back, hips, and around the incision.
- This pain will get better with time as your body heals, so it is important to be patient as your body is healing.
- Many patients report that their prior back pain and/or leg pain is much improved soon after surgery.
- It is normal to have a sore throat after endotracheal intubation, and this will improve over the week after surgery.

Medications

- You will be given prescriptions for a pain medication and a muscle relaxer.
- Do not take pain medication on an empty stomach. This may make you feel nauseated.
- Do not drink alcohol if you are taking pain medication.
- Most patients can taper off the pain medication within a few weeks. The muscle relaxer may be needed a little longer.
- If you feel that your pain is well tolerated, you may begin to wean yourself off of your pain medication sooner than your post-op visit.
- Because pain medication can cause constipation, it is important to have stool softeners and laxatives at home such as Colace or Senna to prevent constipation.
- Take the stool softener daily and use the laxative as needed.
- If you still have constipation after using these medicines, you may use an over-the-counter suppository or enema.

Medications to avoid

- NO Advil, Aleve, Motrin, Naprosyn, Ibuprofen, Naproxen, Mobic, Meloxicam, Celebrex, Diclofenac or any other anti-inflammatory medication. These are anti-inflammatory medications and may impair fusion.
- If you normally take these medications for other medical conditions such as arthritis, we ask that you hold these until otherwise discussed at your office visit.
- NO blood thinners such as Aspirin, Coumadin, Warfarin, Xarelto, Plavix, etc. for 5-7 days after your surgery. We will tell you when you may resume your blood thinners.

Therapy

- You will receive physical therapy while you are in the hospital. This will help you to walk and move around for normal daily activities before you are discharged.
- When you are at home, walk between 30-60 minutes a day, but not all at the same time. Divide your walks into smaller intervals of 10-15 minutes at a time.
- It is important to walk for your overall recovery for a number of reasons. Getting out of bed is good for your lungs, it prevents blood clots from forming in your legs, and speeds your recovery.
- Do not sit for more than 30 minutes at a time. Move around to prevent your muscles from tightening and becoming stiff, which can lead to more discomfort.
- Use your common sense, if your body says that it is tired, listen to it.

Restrictions

- Activities such as bending at the waist, lifting >10 lbs, and twisting are restricted during your recovery period, which is about 6 weeks.
- This means NO household chores such as vacuuming and laundry, hobbies such as golfing, and yard work and gardening.
- If you have young children or grandchildren, do NOT pick them up.
- Allow someone else to help you at home.

- You may drive as long as you are not taking narcotic pain medication.
- It is ok to ride as a passenger if you are taking narcotic pain medication.
- If you are unable to work due to these restrictions, please let us know if we need to complete any paperwork for your employer.

Diet

- When you have a successful bowel movement, you may advance your diet to solid foods.
- It is important to remember to eat and drink fluids so that your body may properly heal.
- If you are experiencing nausea, follow a “BRAT diet” which is Bananas, Rice, Applesauce, Toast and advance as tolerated.

Smoking

- Smoking constricts your blood vessels which carry oxygen and nutrients to your healing bone and muscles.
- It also slows down the bone healing process and may possibly lead to failure of fusion of the bone graft, which is the ultimate goal of your surgery.
- Vaping and other nicotine products also slow healing.
- If you would like help in smoking cessation, please let us know.

Sexual Activity

- Back pain can interfere with your sex life, but we want you to resume normal relations with your partner as soon as possible after surgery. We recommend avoiding sex for 6 weeks after surgery. Once you have begun the healing process, use the position that is most comfortable. You may find that lying on your back is the most comfortable if you can support your partner’s weight or your partner can support him/herself with arms and knees. Side lying may also be comfortable since neither partner is bearing the burden of the weight. Decide if a small pillow at the waist is helpful in supporting the spine and you will probably want a pillow located under your neck and head. Be careful not to twist the lower back. Be sure you communicate your fears and concerns with your partner before you resume sexual relations.

Call our office if you have any of these symptoms:

- Fever over 101°F.
- Constipation that is not relieved by stool medications.
- Redness, warmth, or significant drainage from your incision.
- Pain, swelling, or redness in your calves.
- Unexplained incontinence or accidents involving your bladder or bowel, or if you are unable to urinate.
- Worsening pain radiating down the leg.

Call 911 or go to the nearest emergency room for chest pain, shortness of breath or trouble breathing.

Follow up appointment

- We have scheduled a follow up appointment for you that is 4-6 weeks after your surgery.
- You will be provided with a card listing the date and time.
- If you need this appointment changed, please call our office.

If you are experiencing any problems or have any questions, please call our office.

6 Tips for Recovery from Spine Surgery

1. Put commonly used items within reach.

In the early stages of recovery from spine surgery, patients should avoid bending, lifting, and twisting. It is helpful to place items you use daily on the countertops or shelves where you can easily reach them. Keep toiletry items near the sink. Place dishes on the kitchen counter. You may choose to purchase disposable plates, cups, and cutlery to avoid the need to wash dishes for the first few days after you return home.

2. Arrange for someone to stay with you.

If you live alone, it is a good idea to have a friend or family member stay with you for the first few days after surgery. You may need help with errands or getting around the house. If you require more extensive help after surgery, our office may arrange for home health services.

3. Prepare meals ahead of time.

It can be difficult to prepare healthy meals the first few days you are recovering from back surgery. Prepare your meals ahead of time that you can keep in your freezer. You should also stock your refrigerator and pantry with healthy snacks so you are not tempted to reach for unhealthy convenience foods.

4. Items like slip-on shoes and grabbers can help to avoid bending.

Bending is restricted after surgery. You may want to have shoes that you can easily slip on to avoid bending over to tie your shoes. If you are doing physical therapy exercises or walking for longer periods of time, you may want to have someone help you lace up your shoes instead of wearing slip-on shoes. Grabbers are hand-held devices that are about 2-3 feet long and have a grabber on the end to pick up small items. They can be purchased at large department stores and pharmacies.

5. Take precautions to avoid slipping.

Patients are encouraged to get up and walk around to avoid stiffness. You will want to make sure to avoid any slipping hazards in your walking path. Before surgery, make sure that the areas where you will be walking are clear of tripping hazards. Electrical cords should be secured and out of the way. Rugs should be removed or taped down. A shower mat can help avoid slipping in the shower.

6. Make sure you have extra pillows for support when sitting or lying down.

When lying on your back, a pillow placed under the knees can help to take pressure off your lower back. If you prefer to lay on your side, you can place a pillow between your knees. Reclining chairs and donut pillows can sometimes help to increase a patient's comfort while sitting.

By taking time to prepare yourself and your home before surgery, it will help to ease your mind to know that everything is in place for you when you return home from surgery.

Questions after surgery? Our Virtual Assistant answers common questions 24/7 at md-aid.com/c/southernneurosurgery, or call our office at (470) 293-9800. For chest pain or trouble breathing, call 911.

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PART 3

Questions After Surgery? We're Here 24/7.

Recovering from surgery often brings up questions between appointments: about your activity restrictions, your collar or brace, incision care, or what's normal and what's not. You don't have to wait for a call back. Our Virtual Assistant answers common post-operative questions 24 hours a day, 7 days a week, using information approved by our clinic.

Fastest way: scan the code

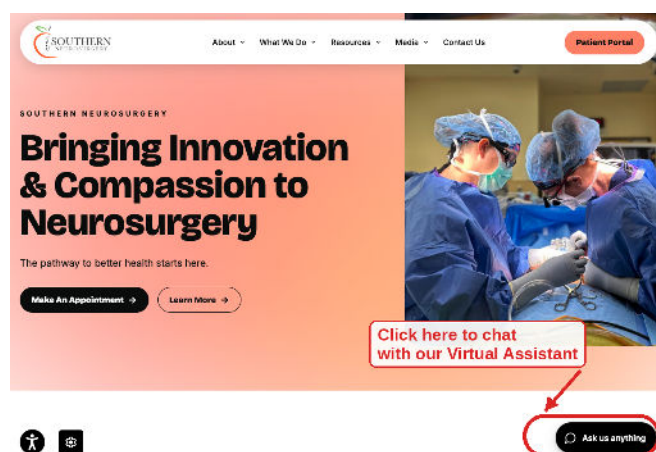
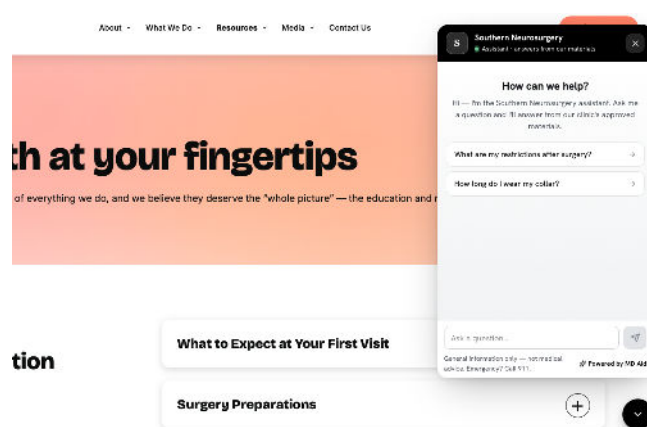
Point your phone's camera at the QR code to open the Virtual Assistant directly, or type this address into your web browser:

md-aid.com/c/southernneurosurgery



Or use our website

1. Go to southernneurosurgery.com and click the black "Ask us anything" bubble in the bottom right corner of the screen (left picture).
2. Type your question, or tap one of the suggested questions to get started (right picture).



Need to talk to a person?

If you don't find your answer or would rather speak with our team, call our office at (470) 293-9800.

Medical emergency? Call 911.

Do not use the Virtual Assistant or wait for a call back in an emergency.

The Virtual Assistant provides general information only. It is not a substitute for medical advice from your physician.