LATERAL LUMBAR INTERBODY SPINE FUSION

PROCEDURE
Different approaches are possible for performing a lumbar fusion. A lateral lumbar interbody spinal fusion is one approach that your surgeon may use to access the spine. A lateral approach allows a larger graft to be placed, which can help with balancing the spine and reducing the risk of graft subsidence (pressing into the vertebral bone end plate—a common problem with weak bones). The lateral approach is also a good way to restore the disc height and to indirectly decompress the nerve roots.

During the procedure, a vascular surgeon may assist your spine surgeon. You will be placed in a lateral position on the operating table, with either your right or left side facing up. Your spine surgeon will make an incision between your ribs and hip crest, directly over the level of your surgery. The vascular surgeon will move the abdominal contents, the aorta, and other important blood vessels to the side to allow a better view of the spine.

Next, to perform the spinal fusion surgery, your surgeon will remove the abnormal disc and replace it with bone, bone morphogenic protein (BMP), an implant, a spacer and a cage, or a combination of these products. The use of BMP will depend on the type of cage/spacer used. Please note that using BMP for lateral bone fusion surgery is an off-label use, which means it was not the purpose originally approved by the FDA. If you have questions regarding this fusion procedure or using BMP, please ask your surgeon.

In certain cases, posterior spinal instrumentation will also be needed for extra stability. In these cases, you will be repositioned during surgery to enable the surgeon to access your back and to place these posterior screws and rods. Your surgeon will explain the stabilization technique before your surgery. With this fusion and stabilization, the bone graft should grow together or “fuse” into a solid unit within 6–12 months.

Your personal lifestyle choices can have a significant effect on the healing process. Choices that lead to a decreased ability to heal or fuse properly include a poor diet, diabetes, lack of exercise, and smoking cigarettes. In fact, some surgeons may choose not to perform this procedure while you are smoking. However, choosing a diet filled with fruits, vegetables, whole grains (instead of processed grains), as well as calcium and vitamin D3 will help the fusion process. If your daily diet does not include an adequate amount of calcium and vitamin D3, then you should consider taking a supplement.

NON-SURGICAL OPTIONS
Surgery is not always necessary. Although most lumbar problems are painful, they are usually not dangerous. Even though your physician has offered you the option of surgery, the decision is yours. Some alternatives to surgery include the use of anti-inflammatory medications, physical therapy, weight loss, smoking cessation, activity restriction, pain medication, injections, and time.
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RISKS OF SURGERY
Different risks are associated with a lateral approach, as compared with a posterior approach. With the lateral approach, in which surgery will occur through the abdominal sidewall, there is a risk of hernia, vascular injury, bowel injury, ureter injury, and nerve injury. Your surgeon will discuss these risks with you. Please note that all surgery carries risks and your surgeon would not recommend this approach if the risks outweighed the potential benefits.

After surgery and recovery, you may not feel you have gotten the kind of pain relief you expected. It is important to remember that there is no guarantee this surgery will provide the pain relief you want. As you and your surgeon discuss this procedure in the office, your condition, and any risks for surgery complications will be assessed and fully explained to you.

While complications from surgery are uncommon, they can be serious and may include:

- Heart or lung problems from general anesthesia, which could be fatal;
- Bleeding, which could require a transfusion;
- Infection, which could require IV antibiotics and another operation;
- Damage to the covering of the nerve, which causes spinal fluid leakage, and which could require a drainage procedure or another operation;
- Damage to the nerves, causing paralysis or permanent nerve damage, although this is rare; and long-term risks include a change from leg pain to a disabling low back pain; and
- Deep vein thrombosis (DVT), or postoperative complications.

The following long-term complications may occur:

- Nonunion (the vertebrae do not mend or fuse together like they should);
- Displacement of the fusion (the fusion shifts position);
- Failure of the medical hardware, which may require another operation;
- Normal aging changes in the vertebrae adjacent to the fusion that are accelerated by the surgery;
- Though rare, in men sterility may occur and prevent the ability to father children.

SURGERY DATE AND TIME
When you decide to have this surgery, you will receive a surgery date and tentative surgery time. Then, on the working day before your scheduled operation date (on Friday for a Monday surgery, for example), you will receive the exact time of your surgery. Your surgeon’s office will call you by 3–5 p.m. to give you this time and make you aware of the time you need to arrive at the hospital. Because
confirmed surgery times are unavailable to us until the day before your scheduled surgery, we appreciate your patience and understanding with this timing.

Before your surgery, preoperative testing will need to be completed. To ensure medical clearance and testing such as blood work and EKG are completed, the surgical facility will contact you and will schedule an appointment. If your surgery is scheduled at an outpatient surgery center, you may receive an order for preoperative testing to be done at your primary care office or local hospital.

BEFORE SURGERY INSTRUCTIONS
This important checklist will help to ensure that you are prepared and ready for your surgery. Please read it and ask your surgeon if you have any questions.

• If you take any blood thinners, for example Coumadin, Aspirin, Plavix, Xeralto, Eliquis, Brilinta, or Ticlid, **make sure your surgeon is aware of this medication, as soon as possible.** You will be given specific instructions regarding any need to discontinue or modify your current use of any blood-thinning medication. If necessary, your surgeon will get clearance from your cardiologist or other physician to ensure that this medication change is safe and appropriate for you, based on your heart history, including prior heart attack, stent placement, or open-heart surgery.

• Stop taking aspirin-based products 1 week before surgery. Also, stop taking non-steroidal anti-inflammatory drugs, such as ibuprofen, Naprosyn, Naproxen, Advil, and Motrin, at least 1 week before surgery.

• **Please do not eat or drink anything after midnight the day of your surgery.** This includes water, coffee, chewing gum, and hard candies. You may brush your teeth with toothpaste the morning of surgery.

• Some daily medications may be taken the day of surgery with a sip of water. **Medications that are appropriate to take (the morning of surgery) will be discussed with you by the hospital staff or your surgeon’s nurse.**

DAY OF SURGERY
Please review all the information in your patient folder, including the map with directions regarding parking locations and outpatient registration in the hospital. This will help you arrive at the hospital for check-in at the designated time provided by your surgeon’s office.

**Your family may stay with you in the preoperation room until your scheduled surgery time.**

The surgery will last 1–4 hours depending on how many levels need to be included.
AFTER SURGERY
After surgery, you will stay in the hospital for 1–3 days. If you are a healthy, active person, then this surgery can be done in an outpatient surgery center, and not require an overnight stay. Post-operative pain is normal and it is important to get up and walk after surgery, even if you do not feel up to it. Walking helps with blood flow and activating the muscles, both of which lead to a quicker recovery. The pain is most intense in the first 2 weeks after surgery, with a gradual reduction after that.

After your surgery, you will be in the recovery room for at least 1–2 hours. When you first wake up from the anesthesia, your throat will feel sore, and you will feel cold, thirsty, and groggy. Intravenous (IV) lines will be connected to supply your body with fluids.

After time in the recovery room, you will be transferred to your hospital room. Your family can return to spend time with you.

You will be permitted to get out of bed on the day of surgery, and your nurses will assist you. To enhance your recovery, your physical therapy activities will begin the day after your surgery.

Your diet will begin slowly, with liquids after surgery. To help your digestive system function well after this abdominal surgery, you will also be encouraged to walk around.

DISCHARGE
You will be discharged after specific healing and physical therapy goals have been met, and you feel ready to go home. Typically, you will go home 1–3 days after surgery.

A follow-up appointment will be scheduled with your surgeon, approximately 4–6 weeks after your surgery.

After you return home and are fully mobile, you may remove the support hose worn on your legs.

BINDER
A binder, which wraps around your abdomen to support the abdominal muscles, may be ordered by your surgeon. If so, you will wear it, as needed for pain, whenever you are out of bed. You do not have to wear the binder in bed or while sitting in a chair.

MANAGING YOUR PAIN
You may have pain at the site of your incision and back pain during the first few weeks after your surgery. To help you manage your pain, when you leave the hospital you will be given a prescription for pain medication. Pain from surgery will change in intensity as you heal. This is normal and expected. Your back pain should slowly improve as the healing process occurs and your fusion becomes more solid. This may take a few months. As the healing progresses, consider these pain management techniques to help you gain control of your pain level.
(Managing Your Pain, continued)

- After any acute surgical pain has improved, you should gradually discontinue use of the prescribed pain medication, which is often a narcotic. Prolonged use of such prescription narcotics will reduce your body’s production of natural pain-fighting chemicals. When this medication is used for an extended period of time, you may develop a tolerance to it, resulting in the need for higher levels of pain medication.

- Once the pain begins to subside and you no longer need the prescription pain medication, Tylenol and Tylenol-based products are safe to use. However, you should avoid non-steroidal anti-inflammatory drugs, such as Celebrex, Motrin, Ibuprofen, Advil, and Aleve. While each of these are important medications for a variety of pain control needs, they can prevent bone fusion. These medications can be safely resumed 3-6 months after your surgery.

- Ice may be used for discomfort as needed.

INCISION CARE

You will leave the hospital with a waterproof dressing on your incision site. This dressing should remain in place for 1-2 days after you return home. Under the dressing will be steri-strips, which are small adhesive strips across the surgical incision. Leave these steri-strips on the incision and allow them to fall off naturally; this usually occurs within 2 weeks. If after 2 weeks the steri-strips have not fallen off, you should remove them.

After removing the dressing, your incision can be open to the air. It is important for a family member to examine your incision each day for 1 week after surgery to monitor it for any changes as the healing process continues.

If staples or sutures were used to close your incision, they will need to be removed 10-14 days after your surgery. Please call your surgeon’s office at (317) 396-1300 to schedule an appointment for this removal.

BATHING

You may shower any time after surgery, but pay attention to your body and don’t shower if you are feeling lightheaded or tired. Simply pat your incision dry after your shower and leave the incision open to the air under your clothing.

Do not take tub baths or Jacuzzi baths, and do not go swimming for the first 3 weeks after your surgery.
CONSTIPATION
General anesthesia, inactivity after surgery, and pain-relieving prescription narcotics may cause constipation after surgery. It will be helpful to take a stool softener and/or laxative after surgery because this surgical approach contributes to constipation. These medications, which include Colace, Miralax, and Senokot, may be purchased over the counter at your local pharmacy.

EXERCISE
After leaving the hospital, physical therapy is not necessary for most patients. Your best therapy is walking, which increases blood flow to the spine and assists in the healing process. Try walking on a structured basis, beginning slowly at first and progressing on a regular basis as your pain begins to lessen.

If your recovery is slower, you may need additional therapy after surgery. If needed, physical therapy will be discussed with you at your follow-up appointment. Be aware that physical therapy will not begin until fusion has occurred 3–6 months after your surgery.

For the first month after surgery daily walking is the best form of exercise. After your 1-month follow-up appointment, a recumbent exercise bicycle, and/or an elliptical trainer are reasonable forms of exercise within the first month after surgery. Once the incision has healed, you can also consider water aerobics and swimming. You should wait until your surgeon has seen your incision before getting in the pool. It is important to avoid bending, lifting, and twisting with your lumbar spine during the first 3 months of the healing process. This would include activities such as: jogging, golf, tennis, yard work and construction work.

RESTRICTIONS
To protect your health and help you feel better as soon as possible after surgery, your surgeon suggests these important restrictions:

- **Do not drive for at least the first 2–4 weeks after surgery.** We recommend you drive only when you are no longer taking pain medications and when you can comfortably turn your body far enough to drive safely using the car’s mirrors.
- **Do not lift anything heavier than 10 pounds** until you see your surgeon at the follow-up appointment 4–6 weeks after your surgery.
- **Do not do things that require repetitive bending, twisting, or lifting.** Such activities include laundry, sweeping, vacuuming, shoveling, or yard work. When you are moving, remember to use good body mechanics, which includes using your legs instead of your back when lifting.
- **Do not smoke:** it is not healthy for your back or your body’s healing abilities.
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(Restrictions, continued)

• Please avoid nonsteroidal anti-inflammatory drugs, such as Celebrex, Motrin, ibuprofen, Advil, and Aleve. These medications may hinder the bone growth needed for the fusion occurring after your surgery.

FOLLOW-UP APPOINTMENT
If you do not have a postoperative office appointment when you leave the hospital, call your surgeon’s office to schedule one. The appointment should be made for approximately 4-6 weeks after your surgery.

If you have questions before your postoperative appointment, please do not hesitate to call your surgeon’s nurse or secretary.

CALL THE SURGEON IF YOU EXPERIENCE ANY OF THESE SYMPTOMS:
• Signs or symptoms of infection, including redness, wound drainage, worsening pain, or a fever of more than 101 degrees;
• New or worsening leg weakness, pain, numbness, or tingling as compared to before surgery;
• Difficulty with bowel or bladder function, especially unrelieved constipation with nausea or vomiting; and
• Calf or leg swelling, tenderness, or redness.

If you have any questions or problems, please do not hesitate to call our office at (317) 396-1300 (or Toll Free (888) 225-5464).

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