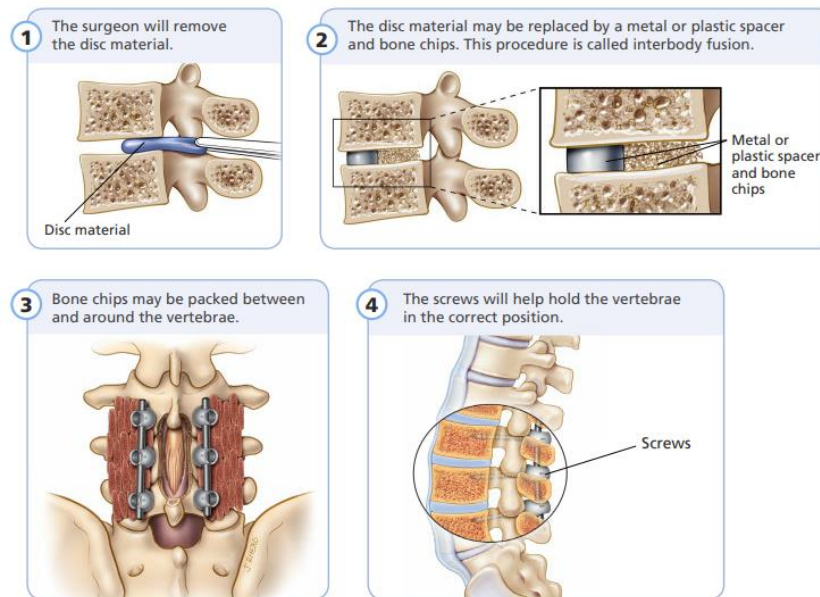


## Lumbar Fusion Pre-operative Information

### What is a Lumbar Fusion?

A “lumbar fusion” is an operation on the lower part of your spine where the doctors place a bone graft and/or metal implants at the unhealthy segments in your back to connect two or more vertebrae (bones in your back). The bone graft used during a fusion may be your own (using the bone removed for decompression), from a bone bank (human cadaver donated bone), a synthetic protein (Bone Morphogenic Protein), or a combination of these. Based on your condition, a fusion may involve multiple levels. The most common indications for a lumbar fusion are disc degeneration (shock absorbing discs wear down) and spondylolisthesis (when one vertebrae shifts out of place in relation to a neighboring vertebrae). A fusion may be performed as a primary procedure or in conjunction with a spinal decompression (taking the pressure off the spinal cord or nerves) and/or discectomy (removing herniated disc material).



There are several types or approaches to a fusion, each having specific indications, advantages, and disadvantages. The type of fusion recommended for you will be based on your diagnosis, imaging findings, symptoms, and history. Your surgeon may recommend one of or a combination of the following approaches:

- ☐ **Posterior Spinal Fusion (PSF):** This procedure is performed from the back and involves a vertical midline incision. A bone graft is placed on each side of your vertebrae to fuse two or more vertebrae together. Commonly, fixation hardware including titanium screws and rods are placed on each side of affected vertebrae to help stabilize your spine.
- ☐ **Interbody Fusion (Posterior/PLIF or Transforaminal/TLIF):** This procedure involves placing a spacer between the affected vertebrae to restore disc space (PLIF). It is performed alongside a posterior spinal fusion. Your surgeon may approach the disk space slightly more from the side (TLIF).
- ☐ **Anterior Lumbar Interbody Fusion (ALIF):** This procedure is performed from the front (the incision looks similar to a C-section incision). A spacer is placed between the affected vertebrae and a plate may be placed on the front of your vertebrae for additional stabilization. This approach requires the assistance of a vascular surgeon as large vessels and arteries need to be retracted during the surgery.

### How do I prepare for surgery?

1. Obtain surgical clearance from your primary care physician within 30 days of your surgery date. This is the patient's responsibility to schedule this appointment. We will fax an order form to your provider with required testing.
  - ✓ Your primary care provider should offer guidance on what medications you need to stop before surgery. They should give specific instructions on how and when to stop *blood thinners* if applicable. NSAIDs need to be stopped 10 days before surgery.
2. Manage your pre-existing conditions.
  - ✓ If you have diabetes, your A1C will need to be less than **7.5%**.
  - ✓ If you have cardiac, pulmonary, or hematology conditions, you may need to see your specialty provider for clearance as well.
  - ✓ If you have low bone density (osteopenia or osteoporosis), your surgeon may recommend you take bone strengthening agents before a fusion surgery. Your bones need to be strong enough to fuse together and to hold possible hardware. You may consider utilizing Vitamin D/Calcium supplements unless your surgeon advises you need prescription therapies to improve your bone health.
3. If you smoke – STOP.
  - ✓ Smoking interferes with wound healing, increases the risk of infection, and can contribute to continued disc degeneration. Smoking will prevent your vertebrae from fusing successfully, causing a pseudoarthrosis or non-union and requiring further surgery. A nicotine test may be ordered prior to surgery to confirm smoking cessation. Insurance may deny coverage of your surgery if you are smoking.
4. Eat healthy and stay active.
  - ✓ A nutritious diet with protein rich foods can aid in postop recovery and healing.
  - ✓ Significant weight gain prior to surgery could result in your surgery being postponed as an increased body mass index is associated with increased surgical complications.
  - ✓ Staying as physically active as possible before surgery can aid in your recovery process.
5. Do not eat or drink anything after midnight the night before your surgery.
1. Utilize Chlorhexidine soap Utilize Chlorhexidine soap 2 days before surgery.
  - ✓ Chlorhexidine soap is to be used the night before then “nose to toes morning of surgery.
2. Do not use any illicit substances or engage in excessive alcohol consumption – doing so will likely result in the anesthesiologist canceling your surgery. A drug toxicology screen may be performed the morning of your surgery by anesthesia.
3. The hospital will call you the afternoon before your surgery date to provide more information about what time and where to arrive for your surgery. The hospital may also call you in the weeks leading to surgery to discuss any health conditions and/or medications.

### **What are my postoperative restrictions?**

You will have **12 weeks** of activity restrictions unless directed otherwise by your surgeon

- No lifting over 10 lbs.
- No bending, twisting, pushing, and pulling at the waist- especially in repetitive fashion.
- Practice good body mechanics (squat with your knees instead of bending at waist, log roll out of bed, etc).
- No heavy housework or yardwork. No bed making. You can do some things around the kitchen such as making light meals and doing some dishes at counter level.
- No active sexual intercourse for 3-4 weeks. If you do resume sexual activity, assume the passive role.

### Can I drive after surgery?

You may ride as a passenger in vehicle for short distances initially; however, do NOT drive until after your postoperative evaluation and your surgeon clears you. You can typically drive after the evaluation if you are off pain medications or sedating medications and feel comfortable. Foot strength, reaction time, and range of motion should be considered when assessing readiness to drive.

### What can I do after surgery to aid in recovery?

**Early walking** after surgery is one of the most important things you can do to speed up your recovery process. Start with short distances and slowly increase your walking as tolerated.

- ✓ Utilize walker if needed (one will be provided at hospital if staff determines one is needed). Can discontinue walker when steady and stable to walk unassisted.
- ✓ Avoid being in one position for more than 40-60 minutes (unless sleeping). Take short frequent walks and change positions often. This will help prevent muscle tightness in addition to other benefits.
- ✓ White stockings (TED Hose) may be provided during your hospital stay. Wear these for at least two weeks or until you have returned to normal walking.
- ✓ Stairs are okay to use, although you may want to avoid having to use them multiple times a day. Take one step at a time and lead with good leg.

Physical therapy may be offered at your 2 week postoperative appointment. Physical therapy is not commonly prescribed before the 2 week appointment as our main goal is walking in the first two weeks, which you can work on at home.

Back bracing is NOT typically prescribed.

### What can I expect after surgery?

Numbness, pain, or weakness in your leg(s) present before the operation may take many months to recover. It is quite common to get occasional twinges of pain on one or both legs, and it is also common to have cramps or aching in your leg(s), particularly at night time. Symptoms may wax and wane throughout the recovery process. Back pain may be worse initially postop as we had to retract and dissect through back muscles during your operation. You may notice bruising at your surgical site or even below it, this is not uncommon and will resolve with time.

We will prescribe medications after surgery for pain control. The medications help make your pain manageable, but you may NOT be pain free initially postop.

- ✓ Pain medications are only prescribed for a short time and you should wean off these as your symptoms allow.
- ✓ Can supplement pain medications with over the counter Tylenol. Do not exceed 4000mg of Tylenol/Acetaminophen in a day (*please note if there is Acetaminophen in your prescription pain medication and factor this in if so*).
- ✓ **DO NOT utilize any NSAIDs for 3 months** after a fusion surgery, as these can slow bone growth necessary for your fusion to heal. These include Aleve, Advil, Ibuprofen, Meloxicam, Diclofenac, etc.
- ✓ Utilize heat and/or ice.

### What can I do for constipation after surgery?

Constipation is common after anesthesia and with pain medication use. Utilize stool softener/stimulant prescribed at discharge (available over the counter if your insurance does not cover) to prevent constipation from occurring. Ambulation, hydration, and chewing gum can assist with prevention as well. Supplement with

Miralax, Milk of Magnesia, and suppository if needed. Consult your primary care doctor if you find yourself unable to pass gas after surgery or if you have not had a bowel movement by post op day 5.

### **How do I care for my incision following surgery?**

- You can shower like normal (no baths). Let water run over incision/dressing. If dressing gets wet from the shower water or saturated by drainage, it will need replaced with a clean dressing.
- Remove dressing 5 days postop and leave incision open to air unless draining. If there are steri-strips over your incision (horizontal strips of white bandage), do not remove. These will be removed at your post op appointment unless they fall off prior to this.
- No submerging incision in bath, pool, lake etc.
- Do not apply any ointments (especially NO Neosporin) or creams on incision.
- Some drainage is normal; however, please call our clinic if you are saturating dressings every few hours or still have drainage one week postop.
- If you have staples, they will be removed in clinic 2 weeks postop.

Swelling, burning, bruising, and itching along the incision are common and will gradually resolve as healing occurs. Watch for fever (greater than 101\* Fahrenheit) and infection. Call our office if concerned about possible infection.

### **What are the risks involved with surgery?**

It is possible that you will be no better after having had this surgery. It is even possible that you may be worse after the operation than you are right now. Therefore, your doctors can make no guarantee as to the results that might be obtained from this operation. Generally speaking, however, our results have been good in over 80% of the patients undergoing this type of surgery. Know that surgery is generally more reliable for leg pain than low back pain.

As in any operation, excessive bleeding, and infection (1-2%) are possible. These complications can result in the need of blood transfusions, antibiotics, and further surgery, persisting disability, and even death (very rare). Injuries to the spinal cord and nerves of the back are uncommon with this kind of surgery but can occur in less than 1% of cases. This type of complication can result in temporary or permanent weakness to one or more of the muscles in one or both legs. 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., sterility, and even loss of the ability to have or maintain an erection in males (rare). In addition, injury to the great blood vessels in the lower abdomen and pelvis can occur. Problems with general anesthesia are also possible, as well as strokes to the brain or spinal cord, heart, or kidney failure, lung failure, pneumonia, and even death (very rare but never zero).

Some patients have continued back problems after this type of surgery, as mentioned above. 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 re-rupture has been less than 15-20% in our experience. Re-ruptures tend to occur more commonly in smokers and in females. Scarring around the nerve(s) can develop causing persistent pain and making the surgery not as successful (approximately 5%), or not successful at all.

It is possible that any fusion done will not heal (called a non-union) as desired resulting in the need for further surgery. It is possible that the hardware could displace or shift requiring the need for further surgery to correct the problem.

There is a risk of developing adjacent segment disease after a fusion procedure; this is when the levels above or below your fusion wear out due to the increased workload at those levels after a fusion. The disc space at another level may collapse, the spine may become unstable, or may degenerate further with age resulting in a recurrence of your symptoms. This may require the need for additional surgery in the future (approximately 20% of patients). Other complications are possible including spinal fluid leakage which may take a long time to subside or even necessitate the need for future treatment or surgery.

Other possible problems are impaired function due to limp, foot drop, continued pain or discomfort due to nerve injury, increased or different pain, bone and/or disk infection, numbness or clumsiness in the leg(s), impairment muscle function in the legs or back 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 costs and time to recovery (if ever) with prolonged time off work and resultant economic hardships and possible emotional, marital, or psychological problems.

### **What are my alternative options?**

There may be alternatives to this operation available to you such as the use of medications, traction, epidurals, and other techniques and procedures. You have likely trialed many of these alternative options prior to surgery. There may be alternative therapies and procedures, however, these carry their own risks and associated complications and have a varying degree of success. Therefore, in those patients in whom a lumbar fusion is indicated we believe this operation provides the patients with a better chance of successful treatment and a reasonably low risk of problems and complications in most cases.

### **When should I call my surgeon's office?**

- If you experience a sudden change in symptoms or strength.
- Concern for infection, temp over 101\* (a low grade fever is not uncommon first few days after surgery).
- Swelling in one leg. We would need to assess for a blood clot in your legs called deep vein thrombosis that can travel to your lungs (pulmonary embolism). Some symptoms include swelling localized to one leg, redness localized to one leg, excessive pain/tightness in one calf, and shortness of breath.
- Questions or concerns that need addressed prior to your 2 week postop appointment.

### **How can I contact my surgeon's office?**

Call provider's office at (219) 738-6670. If non-urgent, send message via our Patient Portal. Call 911 or present to your local ER if you have an emergency. See card in surgery folder regarding Patient Portal for an additional option for communicating with your surgeon's team.

### **SUMMARY AND ACKNOWLEDGEMENT:**

The scope of this informational handout is not intended to be complete. You may want more information and have additional questions. Patients have a 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 the best medical care possible. We need you to be well informed regarding your treatment, tests, and any surgery that you might undergo. If you have any questions or concerns that are not answered, please ask 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 (219) 738-6670. Thank you.