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Lumbar Fusion with the XLIF Technique Pre-operative Information

What is a Lumbar Fusion?
A spine fusion is a surgical technique that connects two bones of spine together with new bone. A fusion can be performed anywhere in the spine. A lumbar fusion refers to fusing two or more vertebrae in the low back. To achieve a fusion, a surgeon needs to open an area around the affected vertebrae and then pack bone graft between the bones. The bones are often held together with screws or other implants that facilitate the healing of the fusion by holding the bones still. A fusion may be combined with other techniques, such as a decompression, to un-pinch nerves and achieve the needs of a specific patient.

What is XLIF?
There are many different techniques to perform a fusion. Some are performed through an incision in the back of the spine, some through a large incision in the abdomen and others through an incision on the side. A fusion is successful when the bones successfully heal one to another. Not all fusion techniques are created equal. The best place for a fusion to heal is in the front half of the spine between the vertebrae. Until the advent of XLIF, the surgery to access the front of the spine involved a large abdominal incision that resulted in a long and uncomfortable recovery. XLIF is a type of minimally invasive spine fusion. It allows us to access the front of the spine through a small incision in the flank. The XLIF procedure has the ability to restore the shape of the spine when there are collapsed discs, scoliosis or a slippage of a vertebrae. In doing so, XLIF is often able to un-pinch nerves without requiring an additional decompression procedure. XLIF was created in 2003 and has proven to be a safe and effective technique for spinal fusion that allows for very little discomfort compared to earlier surgical techniques.

For an XLIF surgery, we have the patient undergo anesthesia while lying on their back. Then they are gently turned on their side. We make a small incision of one to two inches on the patient's flank. A special retractor is placed through the muscle on the side of the abdomen onto the spine. The retractor then opens just enough for us to see the disc between the two vertebrae that are to be fused. This retractor allows us to safely access the spine without cutting any of the muscle of the abdominal wall. The retractor also is equipped with a state of the art nerve detection technology that minimizes the risk of damage to the nerves that exit the spine. Through the retractor, we clean out a portion of the disc between the vertebrae. We then pack bone graft material into an implant that goes between bones. The implant holds the bone graft between the vertebrae and facilitates the fusion as the body forms new bone from the bone graft. Once the implant is in place, we remove the retractor and close the incision. If there are additional procedures that need to be performed, we then turn the patient onto their stomach and proceed with the rest of their surgery.

We employ several advanced techniques to keep you safe during surgery. Neuromonitoring is a procedure where we monitor the function of your nerves throughout surgery. It gives us feedback while you are asleep to know that we have not done anything that compromises the function of your legs. We take X-rays throughout the case to ensure that place your implants with precision. We also employ new techniques that are proven to reduce the risk of a surgical infection.

What to Expect
Some discomfort and muscle spasms immediately after surgery is common. This pain will be temporary and usually resolves in a few days or weeks. Nerve pain in the arm/s is usually immediately improved, but may "flare up" for a few days after surgery as a result of manipulation of the nerve during surgery. Most of the time, any remaining nerve pain in the leg(s) after surgery will improve over the course of four to six weeks as inflammation of the nerve and surrounding tissues resolves. Pain in the back will ease as the muscles and tissues adapt.

A small percentage of XLIF patients have thigh discomfort and weakness in their thigh after surgery. These symptoms resolve within three months and are treated with nerve medication until they improve.

Preparing for Surgery
Once you have selected a date for surgery, the first task we may ask of you is to obtain a medical clearance for surgery. This is an important visit with a primary care physician to ensure that any pre-existing medical concerns have been addressed and have been optimized for surgery. Your anesthesiologist will need this information to care for you safely as we do not want to have any surprises in the operating room. This will need to be done prior to your pre-operative appointment with us.

You will have a pre-operative appointment with Mike Skonieczka, PA-C. The purpose of this visit is to answer your questions and complete paperwork. This visit is very important. It is our chance to make sure that everything is ready for surgery and to answer your questions prior to surgery.

You will get a call from the hospital before surgery. You will be notified when you need to be at the hospital and when you need to stop eating and drinking before surgery. In general, if you have nothing to eat or drink after midnight, you will be ready for surgery the next day. Small sips of water are okay to take with any medications.

- Shower the morning of surgery with the antibiotic soap we prescribe.
- It is okay to wash hair the morning of surgery. Do not use mousse, gel or hairspray.
- No makeup or jewelry.
- Wear comfortable, loose fitting clothing.
- You will need to arrange for a ride home.
- Bring pre-operative packet to the hospital.
- Do not bring valuables to the hospital.

Do I Need to Stop Smoking?
Smoking has a large and negative impact on spine fusions. The chance of obtaining a successful fusion while smoking drops to 50 percent. If you are smoking, it is likely better to delay surgery until you can stop smoking for at least two weeks prior to surgery and 12 weeks afterwards.

When Do I Stop Taking Anti-Inflammatory Medications?
All of the non-steriodal anti-inflammatory pain medications (ie. Motrin, ibuprofen, Aleve) you can buy over the counter, with the exception of Tylenol, act as blood thinners. They need to be out of your system. Stop taking these medications one week prior to surgery. Stop taking aspirin two weeks prior to surgery. We can provide prescription pain medication in this period if you need these medicines for pain relief. These same medications inhibit the healing of a fusion and should not be taken for six weeks following surgery.

Do I Need to Stop Taking Blood Thinners?
Yes. These medicines include Aspirin, Aggrenox, Eliquis, Xarelto, Plavix, Coumadin, Warfarin and Heparin. At the time of surgery it is important that you are able to clot normally. If you take blood thinners, we will need guidance from your primary care physician or cardiologist for the safest way to undertake the transition off of these medications around the time of surgery.

Do I Need to Stop Taking Medication for Osteoporosis?
Fosamax and Boniva are two common medications taken to reduce bone loss. They may reduce your ability to heal a fusion. We ask that you do not take these for one month prior to surgery until two months after surgery. If you have taken medication more recently than one month with an upcoming surgery, do not take additional doses of your medication until two months after surgery. Other newer drugs are coming on the market. If you take these, such as Forteo, mention it to us at your pre-operative visit.

Medications
You will be prescribed medications to ease the pain and muscle spasms after surgery. We ask that you refrain from taking **any** anti-inflammatory medications (Advil, Motrin, Aleve, ibuprofen, naproxen, indomethacin, etc.) for six to eight weeks post-operatively. These medications will adversely affect your fusion by inhibiting bone growth at the fusion site. Regular strength Tylenol, or anything we prescribe, may only be used for pain.

The following are common medications prescribed. They are to be taken on an "as needed" basis. If you have no pain or discomfort, you should not take them.

- **Norco/Dilaudid/Oxycodone/Oxycontin** – These are narcotic pain medications. Do not drive while taking these medications. In addition to drowsiness, they commonly cause nausea and itching. If these side effects are bothersome, over the counter antihistamines (Benadryl, Claritin, Allegra, etc.) typically ease the nausea and itching. Constipation is also common with these medications, so we recommend over the counter Colace to be taken per the package directions.
- **Zanaflex/Flexeril** – These medications are for muscle spasms. They will not be prescribed in every case. These medications can also be sedating. Do not drive while taking these medications.

Wound Care, Dressings and Post-operative Stockings (TED Hose)
In most cases, your surgical wounds will be closed with sutures that dissolve below the skin and does not require removal. There will also be a layer of "glue" over the incision to make it waterproof. The dressing that is placed at the time of discharge from the hospital is also waterproof and you may shower, but not bathe, with that dressing. This dressing should be removed 24 to 48 hours after surgery. Showering without a dressing is allowed, but no soaking the incision in a bath tub/hot tub/pool until you are given the okay. A Band-Aid or gauze with tape may be used to cover the incisions once the hospital dressing is removed. The white stockings should be worn for at least two weeks. After this time and once you have returned to normal walking, they may be removed.

Research
We ask many of our fusion patients to participate in our Spine Clinical Research Registry. This research trial looks at the outcomes for our spine techniques. The information provided by this type of study is critical for us to learn from and improve spine care. If invited, we hope you will participate.

Activity Recommendations

We have developed specific physical therapy protocols with our local physical therapists. This is a summation of our clinical experience and the latest research. If you will be having therapy away from Indianapolis, we can make our protocols available to your therapist.

- You may drive once you are no longer taking prescription pain medications.
- **Two to four weeks after surgery** – Please limit lifting to less than 15 pounds. Walking is encouraged. No vigorous activities or sports are recommended.
- **Twelve weeks after surgery** – Physical therapy is prescribed to help strengthen the muscles in and around the back.
- **Twelve to 24 weeks after surgery** – Usual release to full activities without restrictions.

Follow-up Appointments

- **Two weeks after surgery** – Please call **317.802.2000** to schedule this appointment if it was not made at the time you scheduled your surgery. This visit with Dr. Poulter will be used to answer all the questions that come up once you are home from surgery. At each visit we will check an X-ray and review your progress.
- **Six weeks after surgery** – This visit will be with Mike Skonieczka, PA-C. It is to ensure that you are progressing. We may discontinue your brace at this visit if you are healing well.
- **Twelve weeks after surgery** – This visit will be with Dr. Poulter. It is when we are likely to free you from most of your activity restriction and discuss physical therapy.
- **Six months after surgery** – This visit will be with Mike Skonieczka, PA-C. It is to check that your fusion is maturing.
- **One year after surgery** – This visit will be with Dr. Poulter. Often this is your final scheduled appointment. We often refer to it as your "graduation."