

LUMBAR LAMINECTOMY FOR SPINAL STENOSIS

Purpose

This booklet is designed to be an information source for you concerning your lumbar laminectomy. It is not meant to replace any personal conversations that you might wish to have with Dr. Kitchel, the nursing staff, his office, or other members of the healthcare team. My hope in preparing this booklet for you is that it will answer some of your questions and serve as a stimulus for you to ask appropriate questions about the surgery.

General Overview

Lumbar laminectomies have been performed safely around the world for nearly 70 years. It is indicated for the treatment of lumbar spinal stenosis which has failed to respond to conservative treatment or is creating a progressive neurologic deficit.

In recent years, a number of alternative treatments to laminectomy have come to light. Most of these alternatives are designed for the treatment of herniated intervertebral discs. In your spinal stenosis, the disc is not the culprit pinching on your nerve; instead, it is thickened ligaments and bone spurs which are causing the problem. Because of this, treatment such as enzyme injections into the disc and percutaneous disc removals are not indicated in spinal stenosis.

The role of a fusion in the back has to be individualized for every patient. A fusion simply means taking two of the vertebrae and making them grow together to be solid as one individual vertebra. Dr. Kitchel will discuss the fusion with you if he thinks it is indicated in your case. Not all lumbar laminectomies require fusion. A fusion will add to the recovery and require you to wear a brace in the postoperative recuperative phase.

Indications for Surgery

The indications for lumbar laminectomy are the presence of spinal stenosis proven by radiologic studies accompanied by leg pain that has been unremitting to conservative treatment or numbness and weakness in the leg. In most cases, some attempt is made at conservative treatment with medications and physical therapy before surgery is suggested. The exception to this is the case in which there is a progressive problem with numbness or weakness in the leg which is threatening to become permanent or severe enough to compromise your walking ability.

The treatment of pain with lumbar laminectomy is generally limited to pain that puts unacceptable limitations on your lifestyle. This is normally pain in the distribution of the sciatic nerves from your buttocks down your leg. Loss of nerve control such as numbness or weakness in the legs and accompanying loss of bowel or bladder control are also indications for the surgery.

Preparation for Surgery

There are a number of things that will allow you to have a better result from your surgery by preplanning them before the surgery is done. The most important of these is that you go into the surgery with a complete understanding of what is to be done and a positive attitude that you are taking the right step. This is best accomplished by being sure that all of your questions are being answered. Please do not hesitate to contact Dr. Kitchel or his nurse with any questions which you think may be too foolish or too trivial to bother them with. They truly want you to understand the procedure at length and to have all your questions answered.

You should be sure that Dr. Kitchel is aware of any health problems which you may have or medications that you are taking before surgery. He may want to stop some of the medications because of the possibility that they can increase

your bleeding at the time of surgery. He may also ask you to see your family doctor or internist so that they can pronounce you fit and a good candidate to undergo the surgery. It is also possible that other medications may interact with the anesthesia and the anesthesiologist may ask you to modify how you are taking them.

If you are a smoker, it is advisable that you to stop smoking before the surgery. Your heart, lungs, and spine need to be as strong as possible. It is possible that Dr. Kitchel may recommend a program of aerobic, strengthening, or stretching exercises before surgery. It is also possible that you may be asked to see a physical therapist before surgery to show you a conditioning exercise program.

Lumbar laminectomy may require blood replacement. If Dr. Kitchel feels there is a possibility that you may need blood after your surgery, he will ask you to store some of your own blood ahead of time to avoid the transmission of blood borne diseases such as hepatitis or AIDS. If you are asked to store your own blood, you will be given nutritional supplements such as iron and calcium to maintain your blood balance. The blood will be stored in a blood bank and given to you in the hospital following surgery.

Surgery

For lumbar laminectomy you are admitted to the hospital or surgery center the morning of surgery. It is no longer necessary for you to come into the hospital the night before. This allows containment of costs at the time of surgery and also allows the patient to have a good nights' rest at home before they enter the hospital or surgery center. It is important that you do not eat or drink anything after midnight the night before surgery. This will allow the anesthesia to be safely administered.

Once you have been admitted to the hospital or surgery center, you will be taken to a room and prepared for surgery. This will include instruction about the surgery, cleansing of your back, as well as instruction about the postoperative period. In most instances, you will have spoken with the anesthesiologist before your admission to the hospital or surgery center and have decided on the type of anesthesia. Dr. Kitchel has no preference as to the type of anesthesia and this should be worked out between yourself and the anesthesiologist so that you are both comfortable that it is being administered in the safest possible fashion.

About 1/2 hour before the surgery is actually to begin, you will be taken up to the operating room and put into a holding area. The anesthesiologist will come and visit you and start your IV at that time. You will then be taken to the operating room and anesthesia will be induced. Once the anesthetic has been successfully administered, you will be positioned for the surgery and surgery will be carried out.

After surgery you will wake up in the recovery room where your vital signs will be monitored and your immediate postoperative condition will be carefully watched. Most people stay in the recovery room between one and three hours after surgery. Once the anesthesiologist feels that you are doing well, you will be returned to your room in the hospital or discharged home if your surgery was done in the surgery center. The evening of surgery, it is normal for your back to be quite sore. If you stay in the hospital, the nursing staff will be checking to make sure that your vital signs are stable and that there is no problem with either the wound or nerve function in your legs. Dr. Kitchel will be by to see you the evening of surgery to discuss how the surgery went and make sure that things are going as expected.

Most patients are up and out of bed the same day of surgery. It is important to get you out of bed early to avoid the complication of blood clots forming in

the legs or possible breathing problems associated with remaining in bed. The physical therapist and nursing staff will come in and help you make sure that it is an easy transition from lying to walking. Dr. Kitchel has prescribed a specified program of walking and exercises for the first few days after surgery. The physical therapist will take you through this gently and utilize their expertise.

Your intravenous catheter will remain in place until you are comfortable taking oral pain medication. This is to give you adequate fluids as well as antibiotics in an attempt to lessen any chance of infection. You will also be taking pain medication through your IV until you are comfortable with medication by mouth. After that the pain medication will be given by mouth. You may also have a catheter placed in your bladder. This is simply for your comfort and to allow you not to have to get on and off the bed pan. This will likely also be removed when you are comfortable voiding.

The dressing will be changed as needed and if a small drain tube was left in the incision it will be removed once the drainage has diminished. Once the drain tube has been removed you are free to shower and change the dressing each day. Once any drainage from the wound has ceased, you do not need to keep it covered with a dressing, it may simply stay open to the air.

If you remained overnight in the hospital, most patients go home from the hospital on the first day after surgery. Dr. Kitchel will see you in the hospital that morning and then discuss with you the medications to take home as well as a prescribed program of activities. In general, you should do no bending, heavy lifting, or stooping at home until you are seen back in the office by Dr. Kitchel. You should take your medications as he prescribes. Be sure Dr. Kitchel answers all of your questions before you go home from the hospital or surgery center.

Generally, Dr. Kitchel will see you back in the office about ten days to two weeks after surgery to assess the wound. If, during that first week of surgery, you have any questions or problems, you should call him at the office immediately.

The Operation

Laminectomy aims to relieve the symptoms of leg pain, numbness, and weakness by removing whatever is irritating or compressing the spinal nerve. This is accomplished through a posterior incision over the back with removal of anything that is pushing on the nerves.

An incision is made down the midline of the back long enough to gain access to all the areas of spinal stenosis. The muscles are retracted out of the way to each side to expose the bones of the spine. All bone and ligament that is compressing the spinal nerves is then removed with instruments which allow protection of the nerve. Once this is done, each individual nerve root is then followed out through the spinal canal to assure that there is no further compression. Once this has been accomplished, the entire wound is washed out and sewn up. A sterile dressing is then applied. You are then rolled back onto your bed and the anesthesia is reversed. When the anesthesiologist feels it is safe, you are taken to the recovery room.

Risks and Complications

Your decision to undergo surgery should not be made lightly. You need to understand that there are certain risks and complications which accompany any surgical procedure. Thankfully, complications in lumbar spine surgery are rare. The most common complication is an infection. This occurs in approximately 1-2% of all spine surgery. Dr. Kitchel will do everything he can to avoid this complication. Your back will be steriley scrubbed and the operation will be performed in a sterile room. Gloves, gowns, and masks will be worn by all personnel in the room. You will be given antibiotics for 48 hours around the time

of surgery. Despite all these precautions, infection does occasionally occur. Infection is generally not a devastating complication, but may require that the patient come back into the hospital for further antibiotics and possibly to reopen the wound. If you have any personal history of susceptibility to infections, this should be communicated to Dr. Kitchel before surgery.

The complication of blood loss is rarely significant in lumbar laminectomy. Although in rare instances catastrophic blood loss may occur. The general blood loss will vary with how extensive a procedure must be done to free up the nerves. If Dr. Kitchel feels that there is a likelihood of enough blood loss to require replacement, then you will be asked to pre-donate some of your own blood ahead of time so that it may be stored and used at the time of surgery. Your blood volume will be monitored carefully while you are in the hospital and if blood replacement is required, this blood will be returned to you.

A tear in the sac around the nerves may occur at the time of surgery. This is technically called a dural laceration. If this should occur it will be repaired at the time of surgery. If this does occur, Dr. Kitchel will keep you down in bed for a day or two surgery. Generally, there are no long-term problems associated with dural tears. The important part is that the tear is repaired and does not leak.

New nerve damage is the rarest of all complications. This occurs in approximately 1/1000 cases. If there is new damage to your nerve, it could result in numbness, tingling, or pain. In all likelihood it would not result in permanent paralysis.

The risks of anesthesia should be covered in your conversation with the anesthesiologist. It is up to you to be sure that you are comfortable with the form of anesthesia which you have chosen. Dr. Kitchel has no specific preference for whether you go all the way to sleep or have a spinal block.

Expectations After Lumbar Laminectomy

The desired result of your lumbar laminectomy is to get rid of your leg pain and allow the numbness and weakness in your legs to resolve. The earliest result to be expected is the lessening of the pain. This will often be difficult to tell in the immediate postoperative period because the back will be painful from the surgery. However, most patients notice that within a day or two the leg pain has significantly diminished. It is not unusual during the first few weeks after surgery to have waxing and waning of the leg pain with some occasional jolts of severe pain. This should not scare you or make you think that the old pain is returning.

The return of the muscle function in your leg will be somewhat slower. You should not anticipate that this will return as quickly as the pain goes away. A general rule of thumb is that the strength will return over about the same course of time that it took to lose it. In other words, if you have had weakness in your leg for six to eight weeks before surgery, it will take six to eight weeks after surgery to regain that strength.

The slowest thing to return is any loss of sensation or feeling in the leg. This will return very slowly and is often discouraging to patients. You can anticipate that it will be several months before the sensation returns. In some cases all sensation may never return. This is because the sensation is the most sensitive portion of the nerve and in some cases will never fully recover.

When you first go home from the hospital or surgery center, the best form of therapy is simply daily activities and walking. You should not be engaged in any heavy lifting, bending, or stooping. You will find that frequent changes in your position will help your back to be its most comfortable. Once Dr. Kitchel feels that your wound is adequately healed, he will start to increase your activities.

The first of these will be a walking program. Once there has been further wound healing you will begin on a supervised physical therapy program of exercises to re-strengthen your back.

When You Go Home

If you remained in the hospital overnight, Dr. Kitchel will generally tell you the evening before he plans to dismiss you the next morning. The hospital prefers that you go home in the morning before 11:00 a.m. That morning, Dr. Kitchel will come in and visit you to answer any questions as well as arrange for your take-home medications and an appointment to see him back in the office.

When you get home, it is important to maintain moderate physical activities. You should not overdo it, but by the same token you should not spend all your time in bed or sitting.

You will have medications to take home as they are ordered by Dr. Kitchel. It is important that you take all of this on the schedule which he has provided you. His assistant will call you within a day or two of your discharge to make sure everything is going okay.

Unless Dr. Kitchel has specifically told you otherwise, it is all right to shower and cleanse the wound with simple soap and water. Simply dry the wound well after showering. It is not necessary to cover the wound unless there is any drainage from the wound.

Reasons to Call Dr. Kitchel After Surgery

1. New pain, weakness, or numbness that begins after you get home.
2. Fever, headache, or extreme fatigue.
3. Drainage from the wound that was not present at the time of being discharged from the hospital.
4. Difficulty with bowel or bladder control.
5. Any questions about your surgery which were not covered in your conversation with Dr. Kitchel or by this booklet.

The office telephone number is 393-0100. There is someone available at the office from 8:00 a.m. to 5:00 p.m. on weekdays. There is also a physician available on-call 24 hours a day including weekends. Please do not hesitate to call if you have any questions.

Again, this booklet is not designed to replace your personal communication with Dr. Kitchel or his nurse. It is simply meant to serve as a reference about lumbar laminectomy and to answer any questions which you may have. Each procedure is different and the specifics of your operation will vary depending on your exact condition, the schedule, and Dr. Kitchel's other responsibilities. I hope that it will help to ready you for your surgery and allow you to enter into it with a good understanding.