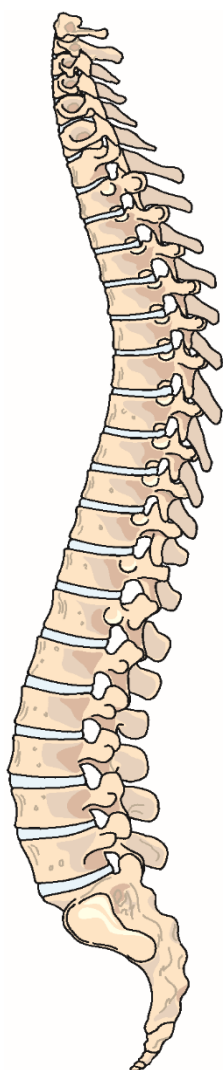




**KAISER PERMANENTE®**

# Spine Center

Surgery of the Lumbar Spine (Low Back)  
Patient Pre-Operative Packet



Detailing your road to recovery

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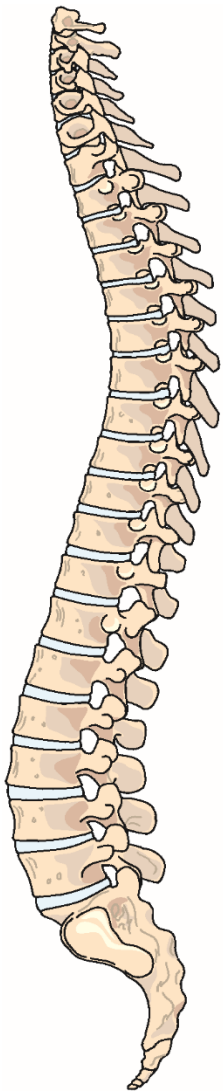
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## Introduction

As a patient, the best thing you can do to ensure successful and timely recovery from surgery is to understand your surgery and prepare for it.

This booklet explains how lumbar spine surgery works, how to prepare for your surgery, and what to expect in the days leading up to and following surgery. In addition to reading this booklet, it's important to continually engage with your care team and ask questions to help you understand your specific condition and treatment.

## Overview of Lumbar Spine Surgery



Your low back, also known as the lumbar spine, consists of the last five bones of your spine which are located just above your tailbone or sacrum. These bones are called vertebrae, and play an important role in protecting your spinal cord and the nerves that go into your legs and feet. In between each of these bones are soft disks

filled with a jelly-like substance. These disks cushion the vertebrae and keep them in place.

Certain conditions (such as a herniated disc or bone spurs) can cause the spinal cord or spinal nerves to become compressed. When compression to the spinal cord or nerves occurs, patients may experience symptoms such as myelopathy (difficulty with balance, bowel and bladder function or difficulty with walking) or pain and numbness in the area that nerve supplies (radiculopathy).

Lumbar spine surgery typically becomes a treatment option if other attempts to treat the back have failed. There are several different types of lumbar spine surgeries, and the type of surgery performed depends on each patient's medical case. Your ability to describe your symptoms to your doctor, your physical exam and imaging give your doctor the tools to decide what type of surgery will give you the best chance of alleviating your symptoms.

Surgeries are categorized as either Anterior, Lateral or Posterior Lumbar Surgeries, depending on whether the surgery is approached from the front (Anterior), side (lateral) or back (Posterior).

### ***Posterior (Back) Surgeries (most common approach)***

A posterior approach is used when the bone overlying the nerves needs to be removed, for example to alleviate pressure on the spinal cord or nerves or to place screws and rods in place for stabilization. Examples of posterior lumbar surgeries include:

- Lumbar discectomies (removal a piece of disc material)
- Foraminotomies (removing bone to create space over the nerve root)
- Laminotomy (partial removal of the lamina bone over the disc space)
- Laminectomies (removing the entire lamina bone)
- Laminectomy and fusion (removing lamina and fusing one level to the next)
- Posterior lumbar interbody fusion 'PLIF' (removing the disc from a posterior approach and placing an interbody device into the disc space to maintain original disc height)
- Transforminal lumbar interbody fusion 'TLIF' (removing the entire joint or facet to get remove nerve compression and place an interbody device to maintain original disc height)

Depending on what surgery is recommended to alleviate your symptoms, sometimes removal of bone, disc or ligament is sufficient to alleviate your symptoms. With significant spinal disease extensive bone removal is needed which then requires the fusing the bones of different levels of vertebra to maintain spine stability.

## ***Anterior (front) Surgeries***

The anterior approach to the Lumbar spine provides direct access to disc space, and is used when a disc or entire vertebral body needs to be removed. Examples of anterior surgery include:

- Anterior Lumbar Interbody and fusion (ALIF)
- Anterior discectomy and fusion
- Anterior corpectomy and fusion (removal of entire vertebral body and two discs)

If a disc is removed completely, the space between the vertebrae will need to be fused with a piece of bone to maintain your spine's normal shape; sometimes the fusion requires the use of plates and screws.

Typically, patients who undergo anterior lumbar surgery require another surgical team to provide access to the spine from the abdominal area, this team is familiar with mobilizing your abdominal organs away from the front of the spine so that the disc can be removed safely. After this approach it is not uncommon to have an 'ileus' which is slowing of the normal gut motility, this may extend your hospitalization so early post-operative mobilization is key to recovery.

## ***Lateral (Back) Surgeries***

A lateral approach is used direct decompression of the nerves is not required. This exposure to the spine is from your side and allows access to some disc levels without the need for going through the abdominal cavity (anterior) and without the need for going through the back muscles (posterior). Examples of lateral lumbar surgeries include:

- Direct Lateral interbody fusion-removal of the disc with placement of an interbody device
- Oblique lateral interbody fusion-removal of the disc with placement of interbody device
- Lateral corpectomy-removal of the entire vertebral body

The best surgical approach for bone, disc or vertebral body removal is decided by your symptoms, the relative stability and alignment of your spine and the experience of your surgeon.

Typically, patients who undergo lumbar **non fusion** laminectomy and/or micro discectomy surgeries return home the same day (outpatient surgery) patient who undergo fusion operations typically return home after spending two to three nights in the hospital.

General anesthesia is utilized for all spine surgeries discussed in this guide. Your anesthesia provider will be able to go over the specifics on the day of surgery. Any previous reactions or ill effects from previous anesthesia should be discussed at this time.

## Scheduling Surgery

After you and your doctor have agreed to a surgical procedure, your surgeon submits a request to our Surgical Scheduling Center. This request includes details like your hospital preference, available dates, and surgical equipment needs. The Surgical Scheduling Center will schedule the surgery appointment and contact you to confirm the appointment and schedule your pre-operative appointment in the Peri-Operative Medicine Clinic.

### *Pre-Operative Consultation*

During the pre-operative consultation, past medical history and diagnoses will be reviewed with you to ensure that medically you are clear to proceed with surgery. The Peri-Operative Medicine Clinic will also discuss your current medications and answer any questions you have about them.

One of the best ways to have a successful surgery and recovery is to know what's going on and what you need to do. It's important to ask questions and make sure you understand what's happening with your condition and treatment.

### *Consent Form*

Prior to your surgery, you will be asked to sign a consent form that:

- Gives your permission for the operation
- States that you know what surgery you are having
- States that you are aware of the possible risks, benefits, complications, side effects, and alternatives

Make sure that you and the health care professionals treating you all agree on exactly what will be done during the surgery or procedure, and that the informed consent form includes the correct information about your operation and your surgical site (for example, the left or right side of your body). Make sure you understand what will be done; you should be able to say in your own words why you are having the surgery and what the risks are.

Below are examples of the consent discussion for specific surgeries:

Surgery Type	Informed Consent
TLIF (Transforaminal lumbar discectomy and fusion)	Consent: The risks, including but not limited to bleeding, infection, cerebrospinal fluid leak, need for further surgery, weakness, paralysis, nonunion, use of off-label BMP for fusion, delayed instability, adjacent spinal instability and degeneration, no improvement of symptoms, worsening of symptoms, trouble with bowel/bladder function, anesthesia risks, stroke, coma and death were explained. We also reviewed possible alternative approaches as well as the expected benefits from the proposed surgery.
Lumbar discectomy	INFORMED CONSENT: Patient/Family was informed of possible risks not limited to bleeding, infection, non-resolution of symptoms, need for re operation, re-herniation of disc material in post-operative period, spinal fluid leak requiring prolonged hospitalization and bed rest, re operation, wrong level surgery, possible weakening of operated level in the future requiring future operative stabilization, paralysis, stroke and death. We also reviewed possible alternative approaches as well as the expected benefits from the proposed surgery.

## Preparing For Surgery

### Stopping Medications

To make sure your body recovers and heals from the surgery, your doctor may need to adjust your prescriptions up to two weeks prior to your surgery. The Peri-Operative Clinic will work with you to ensure you understand which medications you can or cannot take as you prepare for your surgery.

The following instructions provide a generic overview of medications that may be adjusted. The Peri-Operative Clinic will provide your specific instructions.

- **Certain medications (including aspirin, ibuprofen, certain vitamins and herbs, and warfarin or clopidogrel) make it difficult for blood to clot. You may be asked to stop using these or other blood-thinning medications before surgery.**
- **If you are on Coumadin, please contact the Coumadin clinic, In Sacramento at (916) 486-5256, in Napa Solano (707) 645-2520 for instructions and be sure to discuss those instructions with your surgical team. You will also need to let your surgical team know what the recommended amount is for you.**



- **If you are on any anti-platelet drugs such as Plavix and/or Aspirin for a cardiac stent, please consult your Cardiologist regarding the management of these drugs prior to your surgery.**
- **Unless instructed by your surgeon to do so, it is very important that you do not take any anti-inflammatory medications for a period of two weeks prior to your surgery. This could cause your surgery to be cancelled. Examples of these medications include:**

- |            |            |            |             |
|------------|------------|------------|-------------|
| • Aspirin  | • Advil    | • Aleve    | • Ascriptin |
| • Bayer    | • Bufferin | • Celebrex | • Clinoril  |
| • Disalcid | • Dolobid  | • Easprin  | • Ecotrin   |
| • Excedrin | • Feldene  | • Indocin  | • Meclomen  |
| • Motrin   | • Nalfon   | • Naprosyn | • Orudis    |
| • Relafin  | • Soma     | • Tolectin | • Trilisate |
| • Voltaren |            |            |             |

- If you are having a fusion, it is important to continue to stay off of these anti-inflammatories until your fusion is complete as these reduce your body's ability to heal bone.
- Discontinue any of the following supplements not taken under recommendation by your Primary Care Physician. For any you are taking for medical reasons, consult with your Primary Care Physician:

- |                 |                   |
|-----------------|-------------------|
| • Bromelain     | • Ephedra         |
| • Garlic        | • Ginger          |
| • Horsechestnut | • Licorice        |
| • Saw Palmetto  | • St. John's Wort |
| • Feverfew      | • Fish Oil        |
| • Ginko Biloba  | • Ginseng         |
| • Omega         | • Papain          |
| • Vitamin E     |                   |

## Your Checklist for Success

1. **Quit smoking.** Smoking makes it harder for your body to heal, including the healing of bones from having a lumbar spine surgery. Quitting smoking represents the single most important step that anyone can take to enhance the length and quality of their lives. It is difficult to quit, but Kaiser Permanente has many resources available to assist you with smoking cessation. Call your Local Kaiser Permanente Health Education Department for a list of services and programs available to you.
2. **Complete an advance directive.** In the unlikely event that you are unable to speak for yourself or make health care decisions, an advance directive lets you choose someone to make decisions for you. Having an advance directive can give peace of mind not just to you, but to your family and friends as well. You can get an advance health care directive by going online to [www.kp.org/lifecareplan](http://www.kp.org/lifecareplan).
3. **Obtain medical clearance for surgery.** Depending on your preexisting medical history this can be as simple as a telephone interview or as complex as a full cardiac work up. As mentioned above, The Surgery Scheduling Center will work with you to set this appointment up.
4. **Arrange for post-surgery transportation and a caretaker.** Single level discectomies and laminectomies typically are outpatient surgeries and you will be discharged the same day. Fusion operations typically stay in the hospital 2-3 days.
5. **Watch KP Patient Education Videos.** We offer an excellent free online interactive tool created to help you prepare for surgery. [Prepare for Your Procedure – from EMMI™](#). These videos can help you prepare for your procedures and help you understand your care choices and risks.

You can access this tool by visiting [www.kp.org/mydoctor](http://www.kp.org/mydoctor), and following the below instructions:

1. Search for your surgeon by name
2. Click your surgeon's name
3. Click "Yes" if a Security Warning box appears
4. Click "Tools and Classes"
5. Click "Prepare for Your Procedure – Emmi"
6. Click the link of the procedure you are having under "Tools" column
7. If you receive a registration page, fill the required information out, click "Register"
8. Click "English" or "Spanish"
9. Click "Accept"
10. Verify your information and if correct, click "Yes"

\*\*For questions or if you need assistance with this online feature, please visit the Health Education Department at any Kaiser Permanente Medical Office.

## Expected Time Off Work

Disc/lami/foraminotomy	Sedentary occupation	Labor occupation
One or two disc levels	4 weeks	8 weeks

Lumbar fusion	Sedentary occupation	Labor occupation
1 level	6 weeks	12 weeks
2 or more levels	6 weeks	12 weeks

## The Week of Your Surgery

### The day before surgery - confirm your arrival time

At least one business day prior to your surgery you will be contacted by our Perioperative Nurse and given the time you need to report for your operation. If you are active on kp.org, you may receive this information via secure message. This time will be earlier than your scheduled surgery to allow time for your admission and preparation.

Scheduled surgery times may change due to unforeseen events or emergencies. We will make every effort to keep your scheduled time and keep you informed. If you have not been told what time to come for your operation by 2:30 p.m. the afternoon before surgery, please call the Pre-Op Nurse (see page 12 for phone numbers).

### The day of surgery:

1. On the day of surgery, do not eat or drink anything eight (8) hours before the time of your surgery.
2. Be on time for your preoperative check-in. Being late can delay your surgery. Allow extra time for parking or traffic. [Search our location finder](#) for driving directions to your medical center. The web address is:  
<https://healthy.kaiserpermanente.org/health/care/consumer/locate-our-services/doctors-and-locations>
3. Shower the morning of surgery, but do not use any perfumes, colognes, or lotions on your skin. Do not shave the surgical area yourself. Shaving at home may increase infections after surgery. Remove all jewelry and keep it at home.
4. Do not wear contact lenses. They could scratch your eyes during surgery.
5. Have your photo ID and your Kaiser Permanente identification card with you.
6. In Sacramento and South Sacramento please check in to the admitting office on the 1<sup>st</sup> floor. In Vacaville please check in to the Surgery Unit on the 2<sup>nd</sup> floor of our Vacaville Hospital at your scheduled time.

7. After checking in you will be taken to the pre-operative holding area, where you will be introduced to your health care team. Your family members will be shown to the post-surgical waiting room. The surgical waiting room is generally staffed with hospital volunteers that will help inform your family members of the progress you are making while in the operating room.
8. Your nurse will explain what will happen during the surgery and ask you several questions in preparation for the surgery to ensure your electronic medical record is up to date.
9. Your anesthesiologist will meet with you prior to surgery, so you have the opportunity to ask any questions you may have regarding anesthesia.
10. Your Surgeon will also be there to check on you, do a site verification marking with an ink pen to ensure the correct site for surgery, as well as ensure you followed your preoperative instructions
11. Once your surgery is complete you will be taken back to the post-operative recovery room for immediate post-surgical nursing care. After your surgery your surgeon will speak with your family members and explain the specific findings from the surgery. The hospital volunteers will instruct your family members on when they can see you in the post-operative recovery unit.

## Discharge and Post-Operative Care

### In the Hospital

Your post-operative care will cover both nursing care and discharge planning. Our nursing staff ensure that you are provided an excellent healing environment. Physical Therapy department will evaluate you for any equipment needs and for clearance for a safe discharge home. Depending on the operation, post-operative imaging studies may be ordered and evaluated prior to discharge.

Your neurosurgical healthcare team includes your surgeon, his or her surgical colleagues, hospital based medical doctors, intensive care doctors and physicians assistants who will make daily rounds to help you through the recovery process. In some circumstances other Surgeons from our Neurosurgical Team will be checking in on you should your recovery overlap with a day that your surgeon becomes scheduled to perform surgery.

### Discharge Instructions

Upon discharge from the hospital, you'll be provided Discharge Instructions to help you recover as quickly and safely as possible. The instructions provide care instructions and guidelines around diet, medicine, and activity/exercise. Ask your doctor or nurse to explain anything you don't understand. This is a time to seek support from caring family members and friends. If you need help, ask for it.

See page 13 for example Discharge Instructions.

### Follow-up Appointments

Your first follow up appointment is typically with the physician's assistant who followed you in the hospital. The hospital follow up appointment should be scheduled before you leave the hospital. The physician assistant is under the supervision of your surgeon and he/she reports directly to your surgeon. Often times the first visit is used to discuss the current state of recovery, ask questions obtain x-rays or medication etc. Typically this appointment takes 15-20 minutes. After this first follow up visit the second follow up visit is typically with your surgeon. Kaiser has provided a very streamline and easy way to contact your surgeon directly through [mykp.org](http://mykp.org). If at any time you have questions for your surgeon please feel free to use this resource.

## Additional Resources

### Hospital and admission locations

#### *Sacramento Hospital*

2025 Morse Avenue, Sacramento CA 95825

Admissions phone number (916) 973-7450

#### *South Sacramento Hospital*

6600 Bruceville Rd, Sacramento CA 95823

Admissions phone number (916) 688-2522

#### *Vacaville Hospital*

1 Quality drive, Vacaville CA 95688

MOB B 2<sup>nd</sup> floor

Admissions phone number (707) 624-2080

### Peri-Operative Medicine Clinic locations and phone numbers

#### *Sacramento Hospital*

2025 Morse Avenue, Station LL7 (basement), Sacramento CA 95825

(916) 973-7709

#### *South Sacramento Hospital*

6600 Bruceville Rd, MOB 1, 1<sup>st</sup> floor, South Sacramento

(916) 688 2745

#### *Vacaville Hospital*

1 Quality Dr, MOB B, 2<sup>nd</sup> floor #B21

(707) 651-3624

### Neurosurgical Clinic phone numbers

Sacramento Neurosurgical Clinic: (916) 973-5490

South Sacramento Neurosurgical Clinic: (916) 627-7055

Vacaville Neurosurgical Clinic: (707) 624-1659

## Example of Discharge Instructions

The remaining portion of this document is an example of discharge instructions for a Lumbar procedure.

### LUMBAR LAMINECTOMY FOR SPINAL STENOSIS: After Your Surgery Your Kaiser Permanente Care Instructions

A lumbar laminectomy is surgery to relieve pressure on the spinal cord and nerves of the lower spine.

You can expect your back to feel stiff or sore after surgery. This should improve in the weeks after surgery. You may have trouble sitting or standing in one position for very long and may need pain medicine in the weeks after your surgery. It may take 4 to 6 weeks to get back to doing your usual activities. It may take 4 to 6 months for your back to get better completely.

Your doctor or other health care professional may advise you to work with a physical therapist to strengthen the muscles around your spine and trunk. You will need to learn how to lift, twist, and bend so that you do not put too much strain on your back.

The pain or numbness you were having in your legs before surgery should get better or go away completely.

This care sheet gives you a general idea about how long it will take for you to recover. But each person recovers at a different pace. Follow the steps below to get better as quickly as possible.

You can expect to feel better and stronger each day. You may get tired easily or have less energy than usual. Rest as you need to, but staying comfortably active will help you heal.

How can you care for yourself at home?

#### ACTIVITY

- Arrange for extra help at home after surgery, especially if you live alone or provide care for another person.
- For your safety, you must not drive until you are no longer taking pain medicines and you can move and react easily.
- Avoid riding in a car for more than 30 minutes at a time for 2 to 4 weeks after surgery. If you must ride in a car for a longer distance, stop often to walk and stretch your legs.
- Rest when you feel tired. Getting enough sleep will help you recover.
- Avoid heavy lifting or straining right after surgery.
- Be as active as you comfortably can. Do a little more each day. Moving boosts blood flow and helps prevent pneumonia, blood clots, and constipation. Simply walking is excellent activity.
- Until your doctor or other health care professional says it is okay, avoid strenuous activities that involve your back. Examples of these include bicycle riding, jogging, weight lifting, or aerobic exercise.

- Do not drive for 2 to 4 weeks after your surgery or until your doctor or other health care professional says it is okay.
- Try to change your position about every 30 minutes when you sit or stand. This will help decrease your back pain while you are healing.
- You will probably need to take 4 to 6 weeks off from work. It depends on the type of work you do and how you feel.
- Ask your doctor when it is okay for you to have sex.

#### DIET

- You can return to your normal diet when you feel well. If your stomach is upset, try bland, low-fat foods like plain rice, broiled chicken, toast, and yogurt.
- Avoid alcohol while you are taking prescription pain medicine.
- Many people are constipated after surgery. This can be due to the pain medicine and a lack of activity. Be sure you get plenty of fluids, and take a fiber supplement such as methylcellulose (Citrucel) or psyllium (Metamucil) or a stool softener like docusate (Colace).

#### MEDICINE

- Take pain medicine as needed, following the directions carefully. Do not wait until you are in severe pain. You will get better results if you take it sooner.
- Talk to your doctor or other health care professional before starting any new medicine, including an over-the-counter medicine.
- Do NOT take more than one pain medicine that contains acetaminophen (Tylenol) at the same time. Many over-the-counter medicines, as well as the commonly prescribed pain medicines hydrocodone with acetaminophen (Vicodin, Norco) and oxycodone and acetaminophen (Percocet), contain Tylenol. Too much Tylenol is dangerous. Check the labels carefully.
- To avoid an upset stomach, take your pain pills with food.
- After surgery, your doctor will tell you when you can take your regular medicines again. Ask your doctor or other health care professional if you do not know when to restart your regular medicines after surgery.
- If you are given antibiotics, be sure to finish them all. Do not stop taking them just because you feel better.

#### INCISION CARE

- You may shower immediately with the occlusive bandage in place. After 72 hours the outer bandage can be taken off. Do not scrub your incision. You may clean it with plain warm water, and gently pat it dry. Cover it with a dry gauze bandage if it weeps or rubs against clothing. Keep the area clean and dry.
- If you have tapes (Steri-strips) directly on your incision, leave them on for a week, or until they loosen and come off on their own.
- Do not soak the incision under water during the first 2 weeks.
- You may have some swelling around your surgery site. This is normal and may take several weeks to go away.

#### EXERCISE

- Do back exercises as instructed by your doctor or other health care professional.
- Your doctor or other health care professional may advise you to work with a physical therapist to improve the strength and flexibility of your back.

#### OTHER INSTRUCTIONS

- Use gentle massage on your back to reduce stiffness.



Follow-up care is a key part of your treatment and safety. As a partner in your health care, you can do things like keep all scheduled visits, be sure you know the results of all tests and labs ordered as part of your care, and keep an up-to-date personal list of the medicines you are taking. Know how to contact us between visits, and call your doctor or other health care professional if you have signs that you are having problems.

#### WHEN SHOULD YOU CALL 911?

If you think you are experiencing a medical emergency, call 911 immediately or seek other emergency services. Examples of symptoms that may be an emergency include:

- You pass out (lose consciousness).
- You have chest pain.
- You lose bladder or bowel control.
- One or both legs suddenly feel weak or numb.

#### WHEN SHOULD YOU CALL YOUR DOCTOR OR OTHER HEALTH CARE PROFESSIONAL?

- You are sick to your stomach or cannot keep fluids down.
- You have a headache or pain that does not get better after you take pain pills.
- You have a fever over 100.4°F.
- You have signs of infection, such as increasing tenderness, red streaks, or pus from your incision.
- You have signs of a blood clot, such as unexplained pain or swelling in your leg.
- You have new pain or weakness in your legs.
- You have new numbness or tingling in your legs.
- You have trouble passing urine or stool.
- You have loose stitches, or your incision comes open.
- You have blood or fluid draining from the incision.
- You are not feeling better day by day.
- You have any problems with your medicine.

#### HOW CAN YOU LEARN MORE ABOUT LUMBAR LAMINECTOMY?

- Log on: [members.kp.org](http://members.kp.org). Search for lumbar spinal stenosis in the Health encyclopedia.