Spine Surgery: Preparing for Your Procedure

KAISER PERMANENTE®

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General Information

Welcome to the Kaiser Permanente Regional Spine Surgery Department. This booklet is meant to serve as a roadmap for your Spine Surgery, from the Pre-Operative phase through Recovery.

Having spine surgery is a big decision. We want you to have a successful surgery and smooth recovery, and this starts with preparation. You need to prepare yourself by being healthy, understanding the recovery time expected for your surgery, preparing your home to make things easier, and setting up assistance for your return home. Following these steps will help ensure a smooth recovery.

What does it take to get ready?

1. Be your healthiest, eat right, and take time to understand the surgery and recovery.

2. Get your home ready. Let family or friends know about your surgery and arrange for help at home.

3. Read this booklet and write down questions. Our team will address questions at your Pre-op appointment.

4. View the videos describing your surgery on your surgeon's My Doctor online webpage (www.kp.org/mydoctor/(Your Doctor's name)), on the "Tools & Classes" page, "Prepare for Your Procedure – Emmi"

5. We need to be a team, so let us know what we can do to help make this a successful experience.

Your Surgical Team

A team of healthcare professionals is ready to help you prepare for your surgery and recovery. You are part of this team along with your primary care physician, surgeon, physician assistants, nurses, physical and occupational therapists, social workers, discharge planners and our staff at the Spine Surgery Center. You need to be an ACTIVE part of the team by letting us know what your concerns are, so we can address them before surgery.

- Surgeon: Physician who performs surgery
- Physician Assistant (PA): Licensed medical provider working under the supervision of your surgeon
- Anesthesia Provider (MD or CRNA): Specialist who provides medication to induce sleep, during surgery, monitors your breathing, and wakes you up after surgery
- Neurophysiologist: Monitors nerve function during surgery
- Nurse: Healthcare provider monitoring your recovery during the hospital stay
- Hospital Based Specialist (HBS): Physician who medically clears you for surgery and manages medical concerns after surgery
- Physical Therapist: Healthcare provider that helps you recover by teaching proper mobility and exercise techniques
- Patient Care Coordinator (PCC): Nurse specializing in planning your care and medical needs after surgery. If medically necessary, a PCC assists with placement for skilled nursing rehabilitation or home health care. A PCC can also answer questions regarding your coverage for medical equipment.

Your Surgeon: _____

Your Surgery: _____

Risks and Potential Complications

1. Infection: Although your surgeon will take great care to prevent an infection, you may develop one in or around the surgical site, or in other parts of the body (e.g., lungs or bladder). In rare cases, more surgery is necessary to treat an infection. For a fusion procedure, you may receive cadaver bone graft. Bone grafts are processed in a cadaver bone bank and go through an extensive cleaning process. Infections from cadaver bone are extremely rare.
2. Excessive bleeding: In rare cases, a blood transfusion will be needed. Although banked blood is very safe, there is a small risk of contracting conditions such as HIV or hepatitis. There is also a small chance that your body will reject the blood transfusion.
3. Injury to the dura (called a "dural tear"): The dura is a fluid-filled membrane that surrounds the spinal cord and nerve roots. A dural tear typically results in a cerebrospinal fluid (CSF) leak, which may cause headaches when upright that resolve when lying flat. This is usually not a serious problem, and your surgeon simply seals the tear during surgery. To give the repaired dural tear time to heal, you may need to lie flat on your back for 24-72 hours. If you continue to experience headaches after returning home, contact your surgeon's office.
4. Nerve root injury: Nerve damage during surgery can result in pain, lack of sensation, weakness, or incontinence. In some cases, the damage may be permanent.
5. Wound hematoma: If blood collects in the operative site after surgery it can put pressure on the spinal cord or nerve roots. This can cause new onset numbness to your extremities (arms and/or legs), or you may develop incontinence. This typically requires immediate surgical attention based on the severity of symptoms.
6. Deep vein thrombosis (DVT): In rare cases, a DVT can form in the legs and travel to the lungs, and even be life-threatening.
7. Stroke, heart attack, or death: How your body handles surgery depends and what kind of condition you are in prior to surgery. These events can occur during surgery or as you recover from the procedure.

There are several factors that can negatively impact the recovery process and clinical success of the surgery. These factors include, but are not limited to:

- Smoking (nicotine)
- Obesity
- Osteoporosis
- Chronic steroid use
- Diabetes and certain other medical conditions
- Prior back surgery
- Malnutrition
- Post-surgery activities
- Depression
- Long-standing use of narcotics before surgery

Prognosis

The goal of spine surgery is to improve quality of life, increase activities of daily living, and decrease your pre-operative symptoms. Spine surgery has a high success rate (more than 80% of patients report immediate reduction in their pre-operative symptoms), but it may not relieve or reduce your pain. Most patients do have quite a bit of discomfort and feel pretty “worn out” for a few weeks after surgery. You will receive pain medication—both in the hospital and at home—that will help manage this discomfort. Each person recovers at a different pace. For best results stay active, walk, and do not smoke. While surgery helps many people, there is no guarantee it will get rid of your pain completely.

Before Surgery

Coordinating Your Pre-Operative Care

Kaiser Permanente departments are typically located together or in close proximity, including pharmacy, laboratory, radiology, and health education. This makes obtaining the necessary pre-operative studies easier for you.

Another major benefit is our comprehensive electronic medical record system, which allows all healthcare providers involved in your care to stay connected to your health status and collaborate with each other as appropriate.

When every member of the healthcare team is aware of your condition, care is safer and more effective.

Establish Your Plan

Who will drive me to and from the hospital? _____

Who will help and support me at home for 1-2 weeks after surgery? _____

Who will change my dressing?_____

Who will drive me to and from my post-operative appointments (first post-operative appointment is 2-4 weeks after surgery)? _____

Who will help me with my medication? Pick up refills? _____

My anticipated time off from work after surgery is _____

Arrange to Have Help Available Upon Discharge

How family, friends, or other caregivers can help you recover:

1. Provide transportation to and from the hospital for surgery and at discharge, as well as post-operative appointments
2. Be a person available at discharge to listen to your care instructions from the nurse since you may not be coherent enough if you are taking pain medication
4. Ensure you are taking your medications as prescribed
5. Shop and prepare meals
6. Do Laundry or other household chores
7. Take care of other family members or pets
8. Assist with changing your bandages after surgery as needed
9. Help you with your activities of daily living (e.g., hygiene)
10. Walk with you to ensure you are steady
11. Help keep your spirits up—recovery can have up and downs

Speak with your family or friends and ensure you have a plan in place, as your surgery may be postponed if you do not have an established SAFE DISCHARGE Plan.

Plan to have some form of help at home to assist you for 1-2 weeks after surgery.

If you do not have family or friends available, you can hire help at your own expense. Please contact your primary care physician to refer you to a Social Worker for resources prior to your date of surgery.

Pre-Operative Appointments

- **Peri-Operative Medicine (POM)**: This appointment is important to medically assess your relative risk for surgery and to potentially address any medical concerns that may arise during the peri-operative period. This appointment will either be in-person or over the phone, depending on your health profile. Be sure to report all the over-the-counter medications (including herbal) and prescription medications you take. You may have blood work, an ECG (electrocardiogram), and a Chest X-ray ordered. Please ensure you have completed all pre-operative testing (laboratory/radiology/ECG) as instructed.
- **Teaching session**: You will be scheduled for a pre-operative teaching session with a clinician. This is a valuable opportunity to ask questions or discuss concerns you may have.

Illness

If you develop any kind of illness such as cold, flu, increased temperature, tooth abscess, herpes outbreak, urinary tract infection, or any other "flare up" of a health problem in the 10 days prior to your scheduled surgery, it is extremely important to notify your surgeon's office immediately. Sometimes minor health problems can be quite serious when combined with the stress of surgery.

Do NOT shave or wax your legs, underarms, or the area of your body that will be operated on less than one week before your procedure. If you develop any skin lesions (red, hot, raised, or broken skin) near the area of surgery, please notify your surgeon's office or email through your KP.org account.

If you need to cancel your surgery, please notify your surgeon's office immediately. With sufficient notice, we can usually offer surgery to other patients who are waiting.

Change in Symptoms

If you develop a significant change in spine-related symptoms (different pattern, intensity, or different limb), please notify your surgeon's office prior to surgery. Further examination or tests may be needed prior to your surgery date.

Medications

- It is important that you do not take any anti-inflammatory medications for at least 10 days prior to surgery, or your procedure may be cancelled. These medications can "thin" your blood, increasing the risk of blood loss during surgery. If you are unclear which medications may be anti-inflammatory, please consult your primary care provider.
- **If you are on Warfarin (Coumadin), please contact the Anti-Coagulation clinic for instructions.** Be sure to discuss those instructions with your Peri-Operative Medicine (POM) physician.

- **If you are taking anti-platelet drugs such as Clopidogrel (Plavix) and/or Aspirin for a cardiac stent, or taking any other blood thinners, such as apixaban (Eliquis) or dabigatran etexilate (Pradaxa) please consult your cardiologist or primary care provider regarding the management of these medications prior to your surgery.** Be sure to discuss those instructions with your Peri-Operative Medicine (POM) physician.
- Discontinue all supplements at least 10 days prior to your surgery.

Durable Medical Equipment (DME)

DME items, which are assistive devices such as walkers, canes, and certain braces for which there is a medical necessity, may be ordered for you before discharge. If a non-covered item is requested, you will be provided with information regarding how it may be purchased. You may call Member Services at (800) 464-4000 to determine your DME coverage.

Please note that “reachers”, “grabbers”, and raised toilet seats are NOT covered by the Kaiser Health Plan. These can be purchased at a local medical supply store or online.

Staying Active Before Surgery

- Cardio: Walk, swim, or bicycle for at least 30 minutes a day. Feel free to break this time down into increments as needed.
- Core: Perform the plank (or modified plank—on knees) exercise three times a day for 5 days out of the week.
- Practice Log Rolling: This will be the easiest way to get out of bed after surgery while protecting your back.

Smoking

It is imperative that you STOP SMOKING OR USING OTHER NICOTINE PRODUCTS (including vaping, chewing tobacco, gum, patches, etc.). Kaiser has resources to help you quit smoking, including wellness coaching, smoking cessation classes, and medications that may be available. Call 1-866-251-4514 or visit www.kp.org/mydoctor/wellnesscoaching. Smoking can reduce the success rate of spinal fusion by up to 40%. If the fusion does not solidly heal, then you may not get the pain relief that was intended, and you may require another surgery. Smoking also slows tissue healing, which can make the surgical incision more prone to infection.

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.

Completion of Forms

Insurance forms, disability forms, and any other forms which need to be completed and signed by the surgeon must go to the Release of Medical Information Department. Please do not leave such forms in the surgeon's office. Please refer to the "Miscellaneous" section in this booklet for instructions to apply for disability, if needed.

Checklist to Prepare for Surgery

Home Safety Checklist

- ☐ Remove throw rugs to avoid tripping.
- ☐ Secure extension cords and any other loose items out of the way. Be aware of uneven surfaces, both inside and outside of your home.
- ☐ Provide a place for your pets to be kept while you are walking in your house.Maintain adequate lighting in all areas. Consider night lights.
- ☐ Make sure stair handrails are securely fastened.
- ☐ If you live in a two-story home, consider having your bed on the ground floor.
- ☐ Be cautious of wet floors; tubs and showers must have non-skid surfaces or safety matsinside and outside.
- ☐ Obtain footwear with non-skid soles that stay securely on your feet.

Pre-Admission Checklist

- ☐ I understand my health plan benefits and coverage, including whether I qualify for Durable Medical Equipment (DME) coverage for things like a shower chair, brace, etc.I have made my appointments with other physicians as requested.
- ☐ I have completed my pre-admission screening.
- ☐ I have completed my pre-operative labs and/or other studies.I have started my pre-admission exercise program.
- ☐ I have read and understand the “Complete an Advance Directive” section of this booklet.I know the address I will be discharged to (home vs. family vs. friend) and have arranged transportation to and from the hospital.
- ☐ I will stop taking anti-inflammatory medications 10 days prior to surgery.I will stop taking blood thinners as instructed by the POM clinic.
- ☐ I will keep my blood sugar under good control (if applicable). Contact your primary care provider to help you work on the best control for your blood sugars. A high Hemoglobin A1C can put you at risk for infections and non-healing wounds.
- ☐ I will stop using all tobacco products (if applicable). If you smoke or chew tobacco, our wellness coaches can help you quit. Call 1-866-251-4514 or visit www.kp.org/mydoctor/wellnesscoaching. Quitting now is the most important thing youcan do to enhance your recovery and prevent an infection, reduce your risk for non- healing wounds, or your bones not fusing if you are having a fusion. If you smoke andyou are scheduled for a fusion surgery, your surgery may be postponed until you can quit.
- ☐ Two weeks before surgery I will decrease the amount of pain medication I take daily, so that after surgery my pain may be better controlled.
- ☐ Have a firm chair with arm rests, a high seat, and a straight back for sitting. Low chairs, low sofas, or chairs that roll or swivel are not SAFE.
- ☐ Place commonly used items within easy reach (between hip and shoulder level) so you may get to them without reaching or bending.
- ☐ Do your best to stay as active as you can. A strong body tends to heal faster.
- ☐ Consider installing grab bars on shower walls and getting an elevated toilet seat. These items are not provided by Kaiser.

- ☐ Plan to have ice packs for when you return home. Gel packs can be placed over the wound site to provide soothing relief, reduce inflammation, and numb pain.
- ☐ Apply for disability benefits, if needed. The Spine Surgery Department can give you an estimated time off work release note. The Release of Medical Information Department can assist with filing the paperwork (see appendix for phone number).
- ☐ I will not bring any valuables to the hospital.
- ☐ I can bring the following items to the hospital:
    - Toiletries
    - Closed-toe/non-skid slippers or shoes
    - Additional loose-fitting clothing (socks and undergarments)
    - Assistive aids like glasses or hearing aids

Day Before Surgery

Arrival Time

You will be contacted at least one business day prior to your surgery and given the time to report for your surgical procedure. If you are active on KP.org, you may receive this information through the "Message Center". This time will be earlier than your scheduled surgery to allow for admission and preparation.

If you have not been informed of what time to arrive for your surgical procedure by 2:00 PM the day before surgery, then please call your surgeon's office.

Please note that, on rare occasions, emergency surgery cases may postpone yoursurgery.

Night Before Surgery

To-Do List:

1. STOP eating 8 hours before your scheduled arrival time (including solid foods, nutritional shakes, gum or candies).
2. You can drink clear liquids (water, clear apple juice, black coffee, tea; **no milk, sugar, or cream**) up to 2 hours before your scheduled arrival time.
3. If applicable, consume Carbohydrate Drink 2 hours before your scheduled arrival time to hospital. Drinks should be consumed within 15 minutes.
4. Brush your teeth and floss.
5. Skin Preparation
   - Take a shower and wash your hair and face with your normal soap. Rinse off.
   - Use the skin preparation product as directed.
   - Keep out of eyes, ears, groin area, and armpits.
   - Do not apply any lotions or creams after the shower.
   - Dress in clean nightwear.
6. If you have been given a Bowel Prep Kit, please start the day before surgery as instructed.
7. Relax. You can listen to an online tool: www.kp.org/surgerypodcast
8. Get good rest the day and night before surgery.

SPECIAL INSTRUCTIONS:

_____
_____
_____
_____
_____

Day of Surgery

- Only take medication with a sip of water, and only those approved by the peri-operative medicine physician.
- Be on time for your pre-operative check-in. Being late can delay or postpone your surgery. Allow extra time for parking and/or traffic.
- 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.
- Do not wear contact lenses. They could scratch your eyes during surgery.
- Wear your eyeglasses to the hospital and bring the case (if applicable).
- You may bring your hearing aid and dentures. Please have your companion or family member keep them safe for you prior to surgery.
- Have your photo ID and your Kaiser Permanente identification card with you.
- Do not wear acrylic nails.

After checking in, you will be taken to the pre-operative holding area. You will be asked to repeat your full name, confirm the surgery you are having and the location on your body. These are routine but important elements of the process we use to ensure that surgery is safe. Your family members will be shown to the post-surgical waiting room. Complimentary Wi-Fi service has been made available which allows you to surf the web, check email and otherwise use the internet while at our facility. Information on how to connect your wireless computer or mobile device to the “KP-guest” network is available at the front desk.

Your nurse will ask you several questions in preparation for the surgery to ensure your electronic medical record is up to date. Please be prepared to go over your medications and last doses.

Your anesthesia provider will meet with you prior to surgery, so you can ask any questions you may have regarding anesthesia.

Your surgeon will make a site verification mark on your skin with an ink pen to ensure the correct site for surgery.

Typically, you will be in the Pre-Op area for a minimum of 2-3 hours.

After your procedure, your surgeon will speak with a designated person. The hospital volunteers will instruct your family members on when they can see you in the recovery room (Post-Anesthesia Care Unit "PACU").

After surgery you may emerge from anesthesia in the recovery room with:

- Intravenous (IV) line: This will provide needed fluids and medications. You will start transitioning from intravenous to oral pain medications as soon as possible after surgery.
- Oxygen mask to assist with respiration.
- Dressing: Covers your surgical incision.
- Foley catheter: If present, will generally be removed the first day after surgery. Removing the catheter as soon as possible will help reduce the chance of contracting a urinary tract infection.
- Wound drain(s): Prevents the build-up of blood (hematoma) at the surgical site and is typically removed 1-2 days after surgery.
- Sequential compression device (SCD): Pumps that gently massage your calves to help prevent blood clots. Promotes the return of venous blood flow in your legs.

- If applicable to your surgery, you may have a cervical collar over your neck.

The typical time in the PACU is approximately 3 hours.

If you are going home the same day as surgery, a hospital staff member will transfer you to your car in a wheelchair.

If you are spending the night in the hospital, once you are medically stable for transfer out of the PACU, a hospital staff member will transfer you to the nursing unit in a hospital bed.

Visitation is allowed briefly in the PACU but usually not until you have been there for at least an hour, and always at the nurse's discretion based on activity in the room.

Your time perception can be altered due to medications received in surgery as well as in recovery. The nurses will determine when you are stable to be released.

Same-day Surgery

For selected surgeries, you will return home the same day as your surgery. Following surgery, you will be brought to the recovery room (Post-Anesthesia Care Unit "PACU"). There, you will have a nurse who will monitor you and administer medications as needed. Once you are awake from anesthesia, you will be assisted to the restroom.

Criteria for discharge from the PACU are:

1. Adequate pain control
2. You must urinate
3. You must be able to walk

You will be provided written discharge instructions including when and how to change your dressings, when you may shower, and emergency contact information. Dressing supplies will be provided to you. If you require prescriptions, those will be sent to the pharmacy to be picked up prior to your discharge.

Once you are ready to be discharged, the nurse will call your ride and bring you to the patient pick-up location outside via wheelchair.

Hospital Stay

The length of your hospital stay will depend on the procedure, your condition, and your general health. Most patients go home in a private car after spine surgery. Please plan for this prior your surgery. There are occasions, however, when your treatment team will recommend a short-term stay at a Skilled Nursing Facility (SNF). Criteria for qualification is regulated by Medicare laws. **Not all patients qualify**. If you do not meet the skilled care guidelines but feel that a short stay in a SNF will be preferable over returning home, then a Patient Care Coordinator or Social Worker can assist you in arranging this at your own expense.

Pain Control

There are excellent methods of post-operative pain control available, including oral pain medications and intravenous injections. Your treatment team is highly skilled at managing post-operative pain, but you will probably still feel pain after surgery. Your treatment team's responsibility is to get you as comfortable as possible while ALSO keeping you safe. For most people, pain decreases and mobility increases every day.

There are many ways we measure pain and factors involved in the decision to administer pain medication. If you are too confused or groggy, pain medications may need to be held. Our main goal is to keep you as comfortable as possible while keeping you safe and progressing toward your surgical goals.

Activity

We want to get you moving as soon as possible, since that is one of the best ways for your body to heal. Walking helps prevent serious problems such as pneumonia or blood clot formation in your legs. However, do not try to get out of bed yourself; you will be more likely to fall due to the effects of anesthesia and pain medications. Be on the safe side and ask a nurse or patient care technician to help you get out of bed.

Use your incentive spirometer for 10 breaths per hour. Using this helps clear your lungs, and taking deep breaths helps prevent infections such as pneumonia.

You may be seen by a physical therapist. He/she will assist you with working on getting into and out of bed, mobilizing safely, and stair climbing (if applicable). The physical therapist will indicate whether a walker or other equipment is appropriate upon discharge. Coverage of these items depends on your insurance.

Occupational therapists will teach you daily living activities upon discharge, if necessary.

Social Services Representative / Patient Care Coordinator

A discharge planner will visit you in the hospital to discuss your needs after leaving the hospital. The discharge planner will also obtain authorization from your insurance plan for the items you may need at home.

Discharge Criteria

You must meet these criteria before you are discharged:

1. You pain is managed with oral pain medication

2. You are tolerating your diet without nausea/vomiting
3. You are able to urinate
4. Physical Therapy has cleared you or has made appropriate recommendations for your discharge
5. You have been medically cleared by our HBS doctor

Plan on arranging a ride home from the hospital and help at home for 1-2 weeks aftersurgery.

After Surgery – Home Recovery

Precautions

Avoid repetitive and/or excessive bending or twisting of the spine. Avoid lifting more than 10 lbs for the first month after surgery, 20 lbs for the second month after surgery, and 30 lbs during the third month of surgery, unless directed otherwise.

Your clinician will advise you on lifting restrictions during the postoperative visit.

If provided a brace, please wear it as instructed.

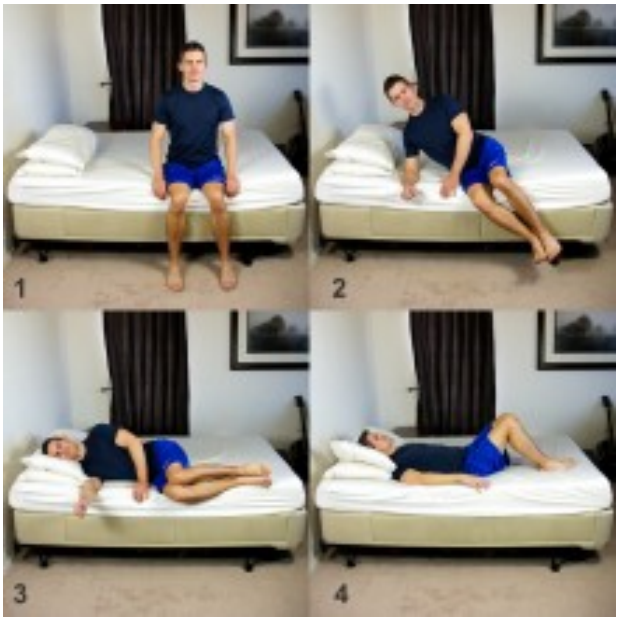
Mobility

Scooting

- Scooting in bed should be done by bracing your abdomen and bending both knees (one at a time) so your feet are flat on the bed.
- Gently lift your buttocks off the bed (bridging) just high enough to prevent dragging on the sheet. Move your buttocks to the side, then lower back onto the bed.
- Scooting should be performed in small increments, “walking” the feet toward the direction of the scoot in between each bridge.
- Keep your abdomen braced and remember to breathe.
- Always scoot far enough into the bed to prevent falling off the side when rolling.

Rolling

- Rolling in bed should be performed using a log-rolling technique. This technique prevents any twisting or turning of the spine.
- Start this technique by bracing your abdomen and bending the knees one at a time as in scooting. Incorrect rolling will create a twisting motion of the spine.



Transferring into/out of bed

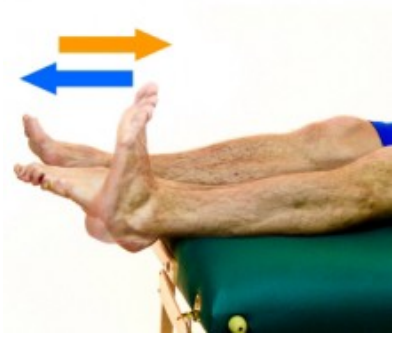
- Transferring in and out of bed is done by sitting on the edge of the bed then scooting the hips back onto the bed as far as possible.
- If the bed is high, consider placing a small sturdy stepstool on the floor near the head of the bed.
- Once seated, place one or both feet on the stool and carefully push your buttocks back farther on the bed.
- Next, keep your abdomen braced and lie onto your side while simultaneously lifting both feet onto the bed.
- Try to perform this movement in one motion so that you are completely lying on your side before rolling on your back.

- If these steps cannot be performed independently, a caregiver will need to help by lifting your legs.
- Reverse this motion to get out of bed.

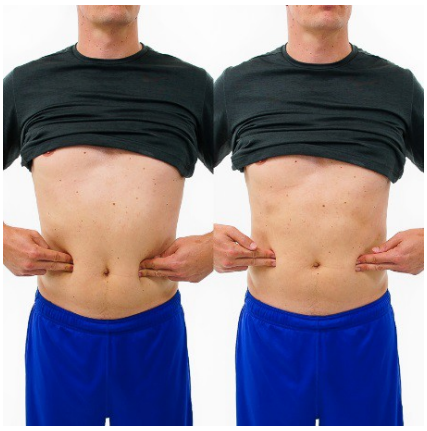
Postoperative Exercises

LONG ARC QUAD While seated with your knee in a bent position, slowly straighten your knee as you raise your foot upwards as shown. Avoid rounding your back when you do so.

ANKLE PUMPS Bend your foot up and down at your ankle joint as shown.



HEEL SLIDES – SUPINE (perform four sets per day, 20 times each set) Lying on your back with knees straight, brace your abdominals and then slide one heel towards your buttock as you bend your knee. Keep your core muscles tight and don't allow your back to move. Repeat on the opposite side.



STABILIZING YOUR CORE (every hour for 1 minute)

Core stability is done by contracting your abdominals as if bracing for a bowling ball about to be dropped on your stomach. There should be a slight outward movement of the muscles pushing into your fingers during the brace similar to a cough or laugh. A proper brace should be felt just inside the pelvis on the front. The belly button should remain in its same position, but you might notice it moving a little toward your feet. This is acceptable; however, moving up toward your head is not. This indicates overuse of the "six pack muscle" (rectus abdominis) and an underutilization of other vital stabilizers. The goal is to be able to perform this bracing technique while breathing. This should be performed with a neutral spine. Since the work is mild, this exercise can be performed often.

Activity and Precautions at Home

Cervical Spine Brace and Restrictions

* A cervical collar (hard or soft) may be provided for you prior to discharge from the recovery room or hospital.

* You may receive a soft foam liner that can be cleaned/washed

* Wear the salmon-colored foam collar during showers if instructed.

* For ANTERIOR cervical surgery patients, continue to sleep with your head of bed elevated for 1-2 weeks after surgery

Lumbar Spine Precautions

* Braces are typically not recommended

* Small motion (i.e., putting on a seat belt or personal hygiene) is allowed

* Avoid soft, low chairs or sofas

* Use a chair with arm and back support

* Use pillows to support your position when lying on your back or side

Performing your home exercises and regular walking are the two most important aspectsof a successful recovery.

In general, AVOID repetitive Bending of the spine, Lifting objects heavier than a gallon of milk (10 pounds), and Twisting of the spine (BLT) immediately following your surgery. Your surgeon will notify you ahead of time as to how long your restrictions are to remain. Typically, restrictions last either 6 weeks or 3 months, but they may be shorter or longer depending on your type of surgery.

After SPINAL FUSION surgery, the dynamics of spinal movement are altered. The fused region no longer moves. Movement occurs at the spinal levels immediately above and below the fused vertebrae. These levels act as "hinges"; therefore, it is extremely important to keep the spine in neutral alignment to protect the inter-vertebral discs and facet joints at these levels from excessive wear. Always avoid slumped or sway-back positions when resting or during activity.

Bending
To keep the spine in a neutral position for bending activities, it is necessary to have good flexibility in the shoulders/hips and strength in the upper/lower extremities. For the cervical spine, this will allow you to bring things up to eye level to look at them. For the lumbar spine, this will allow you to squat with a movement pattern known as hip hinging. Hip hinging is simplybending from the hips rather than from the back for sitting or squatting.

Twisting
Avoid twisting the spine. Moving the head, shoulders, hips, and feet together and avoiding twisting the body are essential for protecting the spine from rotational or shearing forces at the non-fused levels. Development of proper movement patterns in the early phase of rehabilitationis essential in creating healthy long-term habits.

Requesting that family members and friends inform you when you are not moving correctly will help you improve your ability to maintain good body mechanics.

Lifting

Do not lift more than 10 pounds for at least 6 weeks following your surgery. Lifting should always be performed in the neutral spine position and objects must be kept close to the body. A half-kneel or full-squat position should be used for picking up objects from the floor. Consult your surgeon's office before you resume any lifting over 10 pounds.

If you have problems in your arms or legs that prevent you from properly lifting light objects or squatting, your therapist will assist you in the correction of these deficits or in learning modified techniques to protect your spine.

Walking

Walking is your friend during recovery. It is important to walk a short distance every 1-2 hours during the day. Walking helps prevent some of the risks of complications following spinal surgery. Make sure you walk with your shoulders back and in an upright position. Do not lean forward on a walker or other assistive device. You do not need to walk fast, but you need to walk correctly. Quality is also more important than quantity. You should walk a minimum of three times daily, and for a minimum of 30 minutes per day, increasing time and distance as tolerated.

Positioning

Maintain a "neutral" spine position when resting or moving. This is extremely important for both the short- and long-term health of your back. Sitting should be done for only 15 – 20 minutes at a time during the first 2 weeks after surgery.

You should alternate your sitting, standing, walking, and lying on your back and sides frequently throughout the day. You may use a recliner.

Lying or sitting on soft surfaces (e.g., lounge chairs, sofas) is not recommended. This type of surface does NOT to provide adequate support to the lower back and may cause sagging and straining.

Chair Positioning for Thoracic and Lumbar Spine

Sit down, lean slightly forward, and scoot buttocks all the way back into the chair prior to sitting upright. Your feet should be flat on the floor and knees level with, or slightly lower than your hips. If your knees are higher than your hips, the surface is too low. Sit on a cushion or find a tallerchair.

If you are unable to scoot back into the chair while keeping both feet flat on the floor, use a firm cushion or pillow to fill the area between your back and the backrest. A small cushion or other support can also be placed under your feet.

Do NOT slump to provide support to the low back, this will result in gradual strain when sitting for a more than a few minutes.

Lying on Your Back

It is ideal to use a firm, supportive mattress. A soft, sagging mattress will not provide adequate support or maintain proper alignment of the spine. If the mattress is too soft, try placing a board between the mattress and the box spring.

When lying on your back it is advisable to have one or two thick pillows under your knees to lessen the strain on your back. In this position, your hips are bent to at least a 45-degree angle.

Lying on Your Side

To properly position yourself on your side, lie on your back with both knees bent, feet flat on the bed, and place a long bed-style pillow between your legs, spanning the distance from your groin to your ankles.

Make sure you are an adequate distance from the edge before rolling. While tensing your stomach, log-roll onto your side by moving your shoulders and knees at the same time to prevent twisting.

It is often helpful to place a small folded towel at your waistline to maintain good support for your back.

Placing a pillow at your chest or abdomen (stomach) to “hug” may increase your comfort level. If you are unable to position pillows without twisting or straining, you must have someone help you so that you do not injure your back.

Lying on your stomach is not recommended because it can place unnecessary stress on your back.

Recreation/Physical Fitness/Work Related Tasks

Recreation

You should always discuss any recreational activity with your spine surgery provider. High impact activities such as running are to be avoided until discussed with your spine surgery provider first. For long-term protection of your back, it may be necessary to modify recreational techniques. Always incorporate neutral spine, abdominal bracing, and proper body mechanics principles. Not using these techniques may result in repetitive, low level strains to the spine either above and/or below the level of the fusion.

Over time, repetitive movements which do not include proper body mechanics could cause injury to these levels. Using proper techniques can reduce or prevent potential injury.

Sexual Activity

Sexual activity in the supine position (lying on your back) can be implemented 4 – 6 weeks after surgery, as long as the spine precautions of no bending, lifting, or twisting (BLT) are maintained.

Physical Fitness

Returning to your gym workout programs and classes or starting a community fitness regimen is generally not recommended until about 8 – 12 weeks after surgery. You must first be cleared by your spine surgery provider.

Pool fitness programs are recommended, especially for individuals with arthritis. Pool fitness programs may begin after the initial phase of recovery, provided the incision is well healed, at a minimum of 6 weeks.

Outpatient Physical Therapy

Outpatient PT is generally not recommended until 4-12 weeks after surgery. Your surgeon will determine whether or not it is safe and beneficial for you to participate in additional physical therapy in an out-patient setting.

Diet for Anterior Cervical Surgery

There can be swelling near the incision site, a sore throat, and difficulty swallowing after anterior cervical surgery. Generally, if you have difficulty with swallowing it is recommended that you follow a soft diet for 2 weeks after surgery or longer, until the difficulty goes away. This can persist for 2 months or more, but most patients do experience improvement during that time. Please chew solid food thoroughly.

Soft diet includes:

- Pureed fruit (such as applesauce)
- Canned fish and canned poultry
- Fruit juice and vegetable juice
- White rice
- Egg noodles
- White bread
- Mashed potatoes
- Bananas
- Soups
- Yogurt

Driving

You may not drive after spine surgery until you are **no longer using narcotic pain medication or other medications that make you sleepy**, are able to safely get in and out of a car, and be able to sit in a vehicle to drive. Minimum 2-3 weeks after surgery.

You may not drive while still wearing a brace.

You may take short car trips for doctor's appointments, etc., prior to resuming driving.

Postoperative Appointments

You will be scheduled for an appointment after your surgery for a check-up. After the initial post-operative appointment, you may be scheduled for further post-operative appointments. These appointments may be in the office or may be over the telephone. Depending on your surgery

type and recovery, X-rays may be ordered at that time to assess the healing from your surgery.

Please note: Walk-in appointments are not available. Please schedule an appointment to see a spine provider.

Questionnaires

At each postoperative visit, you will fill out questionnaires that have patient reported outcomes (PROs). You may also be receiving these questionnaires in your email at kp.org at 3 months, 6 months, 12 months, and 24 months after surgery if you are not being seen in the office. PROs are how we track your recovery and your surgical outcome. Thank you in advance for completing these questionnaires.

Warning Signs and Symptoms

It is important to recognize the possible warning signs of an infection, impaired wound healing, deep vein thromboses (DVT) / blood clots, changes in sensation, or bowel/bladder function so you can receive early medical evaluation and treatment.

If you start to experience any of the following symptoms, it is important for you to contact your surgeon immediately:

* Chest pain, difficulty breathing, or shortness of breath (Call 9-1-1)
* Rapid heart rate with feeling of dizziness
* Temperature over 101.5˚ Fahrenheit
* Increased redness, increased or persistent drainage, or an opening in your incision
* Foul odor from your incision
* Increasing pain in your back or extremities (arms or legs)
* Pain that is uncontrolled by pain medications
* Changes in sensation in your arms or legs
* Weakness in legs making it difficult to walk
* Any falls with increased back, arm, or leg pain
* Changes in your bowel or bladder function
* Localized calf swelling and tenderness
* Headaches when standing or sitting up that resolve when lying down
* For anterior cervical surgery patients: Worsening hoarseness or problems with swallowing

If you think the symptoms you are experiencing need immediate medical attention or you are unable to contact your surgeon, call the Advice Line, or call 9-1-1, or go to the nearest Emergency Room.

During business hours, you may call the surgeon’s office and/or go to the nearest Urgent Care center or Emergency Room.

Managing Surgical Discomfort

Managing Pain at Home

* Take your pain medication as prescribed by your physician
* Pain medications take at least 30 – 45 minutes to work

* Take your pain medication 30 minutes to one hour prior to your physical therapy or exercise regimen

* As your pain decreases, take less pain medication. We recommend spreading out the time of taking the medication versus skipping doses. For example, if you are taking medication every 4 hours, consider every 5 hours, then every 6 hours, etc.

* Do NOT take more than one pain medicine that contains acetaminophen (Tylenol) at the same time. Commonly prescribed pain medicines such as Norco and Percocet contain acetaminophen. Too much acetaminophen is dangerous. Check the labels carefully.

* Avoid alcohol while you are taking narcotic pain medicine.

* We recommend patients start to wean from medications between 1-2 weeks after surgery.

* Do not wait until your pain is severe to take pain medication

* If pain medication doesn't seem to help, call the Spine Surgery clinic.

* If you need a refill on your prescription in the first 3 months, please contact your surgeon's office. The Spine Surgery department requires a minimum of at least two to three business days to process your request.

- For more detail, **please refer to the Spine Surgery Department Opioid Information and Treatment Agreement** on how the department will manage your pain medications after surgery.

* Depending on your narcotic dosage, you may be prescribed Naloxone (Narcan) in addition to pain medication. Naloxone is a medication designed to rapidly reverse opioid overdose.

Cold Packs

Spine surgery patients can use a cold pack to assist with pain control and swelling. Using a cold pack on your back is recommended to help reduce pain and swelling at the surgical site. Cold packs can be used every couple of hours for up to 20 minutes at a time. Please rotate site and do not use cold pack on same site for extended time.

Please remember that recovery is a process that is different for everyone. People tend to experience ups and downs during recovery, with some people healing faster than others.

Incisional Care & Showering

Surgical Incision / Wound Care

Please refer to your discharge instructions for detailed instructions on changing the dressing.

It is important to properly care for your incision to prevent infection. Use proper hand-washing techniques. Washing your hands thoroughly with soap and warm water must be performed before changing the surgical dressing. No "standing water" (bathtub, swimming pool, or hot tub) until your incision is fully healed (around 4-6 weeks after surgery).

Constipation

Managing Constipation at Home

* Narcotics and decreased movement can lead to constipation

* Take your stool softeners and laxatives as prescribed by your physician. Stop if you are having loose stools (diarrhea).

* Increase fiber in your diet by eating green leafy vegetables and fruits

* Increase your water intake and make sure you drink plenty of water with your pain medication as well as throughout the day (at least 8 glasses per day)

* Consider drinking warm liquids (versus cold) to promote digestion

* Make sure you ambulate every 1-2 hours during the day to assist with having bowel movements

You may not have a bowel movement until 7 days after spine surgery. If you do not have a bowel movement after 7 days, contact your surgeon's office or your primary care provider.

Braces

You may have to wear a neck or back brace after surgery. The decision whether to use a brace and the type of brace used depends upon your surgeon's preference and other factors related to the type of surgery. If indicated, you typically wear a brace whenever you are out of bed, including sitting. You will receive specific instructions from your surgeon or physician assistant.

Dental Procedures

Please avoid any dental procedures for 3 months after your spine surgery. Exceptions would include dental infections or abscesses. Dental procedures can put you at risk for postoperative spinal infections. After 3 months, check with your spine surgery department on whether to use antibiotics prior to dental work.

Frequently Asked Questions

Life After Spine Surgery
Everyone recovers at their own pace. You might need months to feel better. In cases of spinefusion, it will take 6-12 months until your spine is well fused. In general, nerve injuries may takeup to 1-2 years to see how that nerve heals and repairs itself. For spinal cord injury patients, itmay take 1-2 years to see the results of your recovery. Your rehabilitation will take time, effortand patience to recover.

When can I drive?
To drive safely, you'll need to be able to brake quickly, get into and out of the car, and make quick decisions. You will need to be able to turn your head back to see other drivers. You cannot drive with a cervical collar on. You may not drive while taking narcotics. Typically, people may resume driving after their first post-operative appointment – this will be assessed byyour provider.

We recommend driving around 2-6 weeks after the surgery as long as:

- Back and leg pain is controlled
- Driving foot/leg works normally to use brakes and pedals
- Not taking any pain medications or muscle relaxants (which can cause sleepiness and dizziness)
- Overall you feel well enough to sit for the duration of the drive
- No brace or cervical collar is worn

What about sexual intercourse?
Waiting 4-6 weeks after surgery gives your spine some time to heal. It is normal to have less sexual desire while your body is healing. Please ask our office for a booklet which provides more details about spine surgery and sexual health. Please make sure that you do not do anyexcessive or repetitive bending, twisting, or lifting motion.

When can I travel?
It is best not to travel long distances for 4-6 weeks following surgery. For 3 months following surgery you have a higher risk of developing a blood clot in your legs. If you travel, stop often and walk frequently to prevent blood clots. Let your provider know if you have scheduled travelin the first 6 weeks after surgery.

Will I set off the security alarm at the airport?
Probably not. Allow some extra time at the airport. We do not provide any documentation regarding the artificial implants in your spine because airport security no longer accepts theseletters. Generally, your instrumentation is fairly deep beneath your muscle tissue and goes undetected.

How can I get the most out of my spine surgery?
This depends on your age, weight, implants, activity and outlook. You can help your body adaptby maintaining a healthy weight and doing activities with less impact. Progressive activity is thebest way to ensure your body is slowly building up range of motion and strength. Walk instead of running. Try riding a stationary bike, bicycling, or swimming.

When Can I Shower?
You may shower 3-5 days after surgery. Do not submerge yourself/wound in a swimming poolor bathtub until cleared by your physician. You may need to purchase a shower chair for your comfort.

When can I use the pool, Jacuzzi/spa, or take a bath?

Two criteria must be met prior to using the pool, Jacuzzi/spa, or bathtub: Complete skin healing(no scabs; usually takes 4-6 weeks); and good leg strength and mobility (approximately one to three months from surgery).

When can I resume ibuprofen?
If you had a decompression (without fusion), typically you can resume ibuprofen or NSAIDs at 1week after surgery, unless your provider says it is okay to start sooner.

If you had a fusion, it is best to wait at least 12 weeks before resuming ibuprofen or NSAIDs,unless your provider says it is okay to start sooner.

What type of metal/bone graft is used?
A variety of implants are used—please speak with your provider for more specifics.

Can I get a tattoo?
Tattoos are not recommended one month prior to, or after surgery.

Can I get my flu shot?
Yes, you are encouraged to get your flu shot during flu season.

Can I wear nail polish?
We do not recommend use of acrylic nails. You may wear clear polish on your hands and feet;color is not recommended as it may interfere with monitoring equipment during your hospital stay. It will be removed by anesthesia.

When can I start physical therapy?
Physical therapy may be recommended. If so, it will start once you have been cleared by your provider; generally, at least 4-6 weeks after surgery.

Will a nurse come to my home to change my dressing?
No

After surgery can I be discharged home, or will I have to go to skilled nursing facility (SNF)?
Discharges vary depending on your surgery and your progression during the hospital stay. Your physical therapist will determine this during your hospital stay.

Will I have a physical therapist come to my home after surgery?
During your hospital stay, a physical therapist will determine whether you would benefit fromhaving a physical therapist visit your home after discharge.

Can I wear hairspray?
Yes.

Can the doctor fill out my paperwork for disability?
We can provide a note for disability for the short time expected for recovery from surgery. All paperwork for disability must be submitted to the Release of Medical Information Department.

Can I get a haircut after surgery?
You may get a haircut 6 weeks after surgery. Confirm with the provider.

My employer will not accept me back to work with the restrictions; I need to work, what aremy options?

If your EMPLOYER is unable to accept you back to work with restrictions and you are applyingfor State Disability Insurance (SDI) or third-party insurance, you may contact the Release of Medical Information Department for assistance. They will require that you provide a written statement from your employer stating they do not have modified duty available.

Who is going to take care of me at home?
Please ask your family or friends for assistance at home. If you do not have family/friends thatlive nearby, there are centers that can assist with care at home. Please note this is NOT a covered benefit.

Applying for Disability

Please note that the Release of Medical Information Department is the primary resource for questions about disability.

Register and submit your initial claim for disability online at:

www.edd.ca.gov/Disability/SDI_Online.htm

Filing an initial disability claim is a two-step process:

Step 1: Complete the one-time online registration.

Step 2: File an online disability insurance (DI) claim. Please note: You will need to supply the claim receipt number to the medical secretaries for processing.

Once your claim has been submitted online please provide us with the following information:

1. Name and Kaiser Permanente Medical Record Number
2. Your **Patient Receipt Number** (provided online by California Employment Development Dept. (EDD) Sample: #R10000000123456)
3. For EDD extensions provide us with your claim ID number (Sample: DI-1000-123-456)
4. Include timeframe, start and end date, and condition of your disability.
5. Contact Phone Number.

See Appendix for contact information.

Allow 5 days for processing and then check the status of your claim at **http://www.edd.ca.gov/Disability/SDI_Online.htm** or at Kaiser's Release of Information Department.

Additional Resources

Convenient Resources for You

My Doctor Online (www.kp.org/mydoctor) is available at all times and allows you to:

1. Manage your care securely
   a. View and compose secure e-mail messages.
   b. Manage your prescriptions.
   c. View your past visits and test results
2. Learn more about your condition
   a. Read about causes, symptoms, treatments, and procedures.
   b. Find interactive health tools, patient education videos (EMMIs), and podcasts to help you manage your condition
   c. View programs to help you decide on or prepare for a surgery or procedure.
3. Stay healthy
   a. Locate health education classes and support groups offered at different medical centers.
4. View your Preventive Services to see whether you are due for a routine screening or updated immunization.

Watch KP Patient Education Videos

Kaiser Permanente offers 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.

EMMI = Your online surgery preparation resource: www.kp.org/mydoctor

Search for your surgeon by name

-Click your surgeon's name

-Click "Yes" if a security warning box appears

-Click "Prepare for your procedure – EMMI" under "Quick Links" on the right side of the webpage

-Click the link of the procedure you are having under the "Tools" column

If you receive a registration page, fill the required information or click "Register"

-Click "English" or "Spanish"

-Click "Accept"

Verify your information and if correct, click "Yes"

**If you are having difficulty viewing this information, please visit the Health Education

Department at any Kaiser Permanente facility.

Additional Internet Resources

Spine Anatomy Video: www.spine-health.com/video/spine-anatomy-interactive-video

(There are also many good illustrations available on www.spine-health.com)

Medline Plus: www.nlm.nih.gov/medlineplus

North American Spine Society: www.knowyourback.org

Phone Numbers

Spine Surgery Department	(916) 973-7325
Surgery Scheduling	(916) 878-4106
POM Department	(916) 973-7709
Members Services • Use this number to determine your DME coverage	(800) 464-4000
Health Education Department	(916) 614-4035
Release of Medical Information Department	(916) 746-3646
Social Services	(916) 973-6910

Map

Sacramento (Morse) Campus Map
2025 Morse Avenue, Sacramento, CA 95825
Spine Surgery – 2nd Floor, Suite 2G