



The Spine Surgery Program

A comprehensive approach to spine surgery and care.

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Welcome!

Thank you for choosing the Spine Surgery Program at Robert Wood Johnson University Hospital (RWJUH) in New Brunswick, a RWJBarnabas Health facility.

Having spine surgery is the first step toward your new, healthy lifestyle. Great progress has been made in the healing and recovery following your spine surgery procedure(s), and you can expect to be up and walking the very same day, with the target of returning you to regular activity in six to twelve weeks.

The Spine Surgery Program at RWJUH follows a comprehensive, preplanned course of care and treatment and you will be involved in your treatment every step of the way, because you play a large role in having a speedy recovery.

Your care team will include physicians, nurses, advance practice providers, physical and occupational therapists, and patient care technicians specially trained in spine surgery care. You will receive thorough spine surgery care and continuous education to best prepare you for what to expect before, during and after surgery. Please use the following information to help guide you with your spine procedure experience leading up to, during and after your surgery at RWJUH.

Your physicians, nurses, advanced practice provider and therapists may further customize these guidelines to best fit the care and treatment best for you. Keep this reference guide handy for at least the first year after your surgery. Although this guide covers many details and may look overwhelming, it will assist you with your surgery.

Program Overview

Robert Wood Johnson University Hospital and RWJBarnabas Health offers a comprehensive approach to spine surgery and care. Each step is designed to encourage the best results, culminating in your discharge from the hospital one or two days after surgery. The staff members involved in your care are continually trying to improve your surgical outcomes by applying the most advanced treatments and care.

What is Spine Surgery?

Spine surgery is an operation on your back. The bones of the spine protect the spinal cord. The spinal cord sends and receives messages between the brain and the rest of the body.

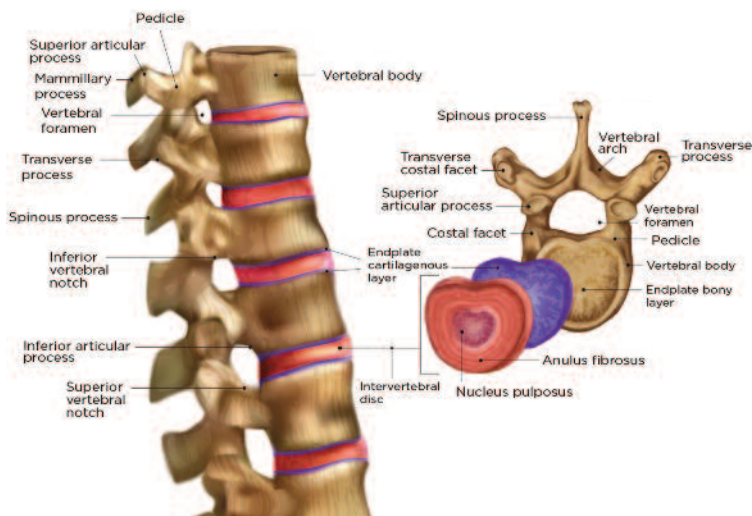
- Neck – which has 7 bones known as C1 through C7
- Chest or mid back – which has 12 bones known as T1-T12
- Lower back – which has 5 bones known as L1-L5

Surgery Site

- **Anterior:** this refers to the front of the body. The incision is on the front of the body, usually the abdomen (belly) or front of the neck
- **Posterior:** this refers to the back of the body. You will be on your stomach for the procedure. The incision is on the back of the body, usually the lower back or back of the neck.

There are many reasons why you may need spine surgery. Most common reasons include:

- A disc (shock absorber) can bulge or push outward and press on nearby nerves. It is referred to as a Herniated Disk
- A disc can become worn and thin and cause the bone above and below to rub together
- Bone spurs can form that put pressure on the nerves



Most spine surgeries relieve pressure on the nerves in the spine by:

- Removing part of the damaged bone (laminectomy)
- Stabilizing the bones of the spine (fusion)
- Removing the entire disc or parts of a disc (discectomy)
- Replacing your natural disc with an artificial disc made of metal and plastic (disc replacement)

Before Surgery

Scheduling Your Procedure

Your surgeon's office will schedule the date and time of your procedure at RWJUH. You can schedule your preoperative testing appointment by calling 732-418-8204.

Make sure that you have made an appointment with your medical doctor and get the presurgery tests your doctor has ordered.

You may call the Joint Care Coordinator at any time before or after surgery with questions, comments, or concerns.

Laboratory Testing

If you are going to a laboratory other than RWJUH Lab for pre-admission testing, you must sign a release form allowing the release of your records to the doctor's office and hospital.

Medication Questions

You will need to stop all anti-inflammatory medications such as aspirin, Motrin®, Naproxen, Vitamin E, etc. These medications can make you bleed more. If you are taking a blood thinner, your doctor will give you special instructions for stopping the medication before surgery. There are also herbal medications that can interfere with your other medications. Check with your doctor if you are taking any herbal medicines. (Examples of herbal medicines include, but are not limited to: Echinacea, ginkgo, ginseng, ginger, licorice, garlic, valerian, St. John's wort, ephedra, goldenseal, feverfew, saw palmetto and kava-kava.)

Advance Directives

An Advance Directive is a way of telling all caregivers the patient's wishes regarding health care. If a patient has a Living Will or has appointed a Health Care Agent and is not able to speak his or her wishes to the physician, family, or hospital staff, the hospital is committed to honoring the wishes of the patient as they are documented at the time the patient was able to make those decisions.

There are different types of Advance Directives and you may wish to talk to your attorney about the legal implications of each.

- **LIVING WILLS** are written instructions that tell your wishes for health care if you have a terminal condition or coma and are not able to communicate.
- **APPOINTMENT OF A HEALTH CARE AGENT** (sometimes called a Medical Power of Attorney) is a document that lets you name a person (your agent) to make medical decisions for you, if you become unable to do so.
- **HEALTH CARE INSTRUCTIONS** are your choices about use of life sustaining equipment, hydration and nutrition, and use of pain medications. When you get to the hospital, you will be asked if you have an Advance Directive. If you do, please bring copies of the documents to the hospital with you so they can become a part of your Medical Record. Advance Directives are not a requirement for hospital admission.

Stop Smoking

It is important to stop smoking before surgery. Smoking slows your healing and raises your risk of infection. Smoking can make the size of your blood vessels smaller and lessen the amount of oxygen in your blood. Smoking can also raise the chances of your blood clotting which can cause problems with your heart. Smoking raises your blood pressure and heart rate. If you quit smoking before you have surgery you will increase your ability to heal. If you need help quitting, contact: New Jersey Quit Line: **1-866-657-8677**.

This toll-free hotline, supported by the New Jersey Department of Health, connects callers to counselors. Counselors can also be reached at <http://njquitline.org>. Tobacco Dependence Program: **732-235-8222**.

Alcohol

It is also important to lower or stop your alcohol consumption before and after surgery. It also can slow down healing and raise your chances of problems after surgery.

Recommendations to prepare for surgery

It is important to have your house ready for after surgery. You can use this checklist as you get your house ready.

- Put things within easy reach; take essential items down from high shelves.
- Check hand railings to make sure they are not loose.
- Clean your house and vacuum carpets, rugs, and the floor. A clean house reduces bacteria and chance of infection.
- Clean, do the laundry, and put it away.
- Put clean sheets and blankets on the bed.
- Make sure you have chairs with arms and a firm seat.
- Make meals and freeze them in single serving containers.
- Cut the grass, tend to the garden, and finish any other yard work.
- Pick up throw rugs and tack down loose carpeting.
- Remove electrical cords and other obstructions from walkways.
- Install night-lights in bathrooms, bedrooms, and hallways.
- Arrange to have someone collect your mail, remove garbage.
- Arrange for pet care, if needed.
- Install grab bars in the shower/bathtub. Put adhesive slip strips in the bottom of the tub.

You can contact your local Office on Aging and Disability for any resources you might need after surgery. Each county in New Jersey has community-based services for older adults.

The Day Before Surgery

The hospital will contact you the evening before your surgery (or on Friday if your surgery is on Monday) to find out what time your procedure is scheduled. You will be asked to come to the hospital approximately two to three hours before the scheduled surgery to give the nursing staff sufficient time to start IV's, prepare, and answer questions. It is very important that you arrive on

time to the hospital as occasionally the surgical time is moved up at the last minute and your surgery could start earlier. If you are late, it may create a significant problem with starting your surgery on time. In some cases, lateness could result in moving your surgery to a much later time. Feel free to bring items to help you pass the time such as books, newspaper, needle work, etc.

The Night Before Surgery

You will need to clean your skin with special antiseptic wash the night before surgery, and the morning of surgery. You will receive the wash and directions at your pre-admission testing appointment. Follow the directions carefully. If you have any questions, feel free to ask. For example, if surgery is on Monday, use the special wash on Sunday night and Monday morning. Your surgeon recommends this special wash to reduce the amount of germs on your skin prior to surgery.

Eating and Drinking

DO NOT eat or drink fluids you cannot see through after midnight on the night before your procedure. You may drink clear liquids (water, apple juice, clear broth) up to 2 hours before your scheduled procedure time. You may be instructed to drink a carbohydrate clear nutrition drink. You may brush your teeth and gargle in the morning. Take your medications as instructed with a small sip of water.

If you make a mistake and accidentally did not follow the above instructions regarding eating or drinking, for your safety, please inform us prior to surgery.

The Day of Surgery

Address of the main entrance to the hospital:
180 Somerset Street
New Brunswick, New Jersey 08901

- Wear clean, loose and comfortable clothing that is easy to put on and take off.
- Jewelry and body piercing are NOT PERMITTED to be worn in surgery and should be removed prior to coming in to the hospital.
- Remove makeup and dark nail polish.
- Do NOT use lotions, gels, hairspray, cologne or powders.
- Contact lenses are not permitted in surgery, please wear glasses or bring a contact lens case.
- You may wear glasses, hearing aid, and dentures, but they will need to be removed before your surgery. Please bring a case to secure these items.
- Remove wigs, hairpins, and hairclips
- All medications are to be left at home. Please bring in a list of your medications including vitamins and over-the-counter medications.
- In the event that your medication is not readily available in the hospital, plan for somebody to bring in your medications. Pharmacy will then verify them before your nurse can administer.

What to Bring to the Hospital

Bring personal hygiene items (toothbrush, powder, deodorant, electric razor, etc.); underwear, shorts, tops; well-fitted shoes with non-slip soles, such as flat shoes or tennis shoes. You may bring battery operated items. If you have adaptive equipment such as a walker or reachers, you may have them brought to you after your surgery. Please make sure that personal equipment is labeled clearly.



When you arrive for your surgery

Go to the information desk in the hospital lobby and ask to be directed to Same Day Surgery (SDS), located on the first floor of the Core Pavilion. When you enter Same Day Surgery you will be asked for

- A copy of your advance directives, if you have one
- Your insurance card,
- Driver's license or photo I.D.
- Any co-payment required by your insurance company

Staff will explain the hospital routines, discuss concerns, and answer questions. You will be escorted to an area to change your clothes. A hospital gown and slippers will be provided to you. You will also be covered with warm blankets. A nurse from SDS will take your vital signs, height, weight, and review/update your medical history if any changes occur. You will receive a visit from your anesthesiologists, who will review your medical history with you and explain their role in the procedure. A urine pregnancy test will be obtained for any female of child bearing years. Any additional testing will be done at this time. We limit the number of visitors to 2 during this pre-operative period, allowing our surgical staff to focus on you with minimal distraction.

Post-Anesthesia Care Unit

When you wake up it will be in the post-anesthesia care unit (PACU). The length of your stay depends upon your procedure and type of anesthesia or sedation used.

- *If you are going home the same day* and are awake and stable you will go to the second phase of recovery, to prepare for your discharge home.
 - We ask that one person be the designated spokesperson for each patient.
 - Once all necessary care is provided the recovery nurse will contact your designated spokesperson to update them on your status.
 - In the second phase of recovery 2 visitors may stay with you.

- Discharge: You must arrange for an adult driver to take you home after your surgery. No patients who receive anesthesia can drive, or take county transportation or taxi service home. Taxi service is only acceptable if you are accompanied by an adult (over 18 years of age).

- *If you are being admitted to the hospital* you will go directly from PACU to your assigned room.
 - We ask that one person be the designated spokesperson for each patient
 - Visitation is allotted in the main PACU within the first hour of your recovery, for 10 minutes.
 - We ask that visitation be limited to 2 people at a time.

Anesthesia

Anesthesia will be custom-fit to your personal needs. The types available for you are:

- General Anesthesia: provides loss of consciousness or awareness.
- Medications are also given to make you sleepy or drowsy and lower your anxiety.

Will I Have Any Side Effects?

Your anesthesiologist will speak to you about risks and benefits associated with the different anesthetic options as well as any side effects that might happen with each type. Nausea or vomiting may be related to anesthesia or the type of surgery. It is less of a problem because of better techniques and medications, but these side effects still might happen for some patients. Medications to treat nausea and vomiting will be given if needed. The amount of discomfort you have will depend on different factors, especially the type of surgery. Your doctors and nurses will do everything possible to lessen pain and keep you safe.

You may be uncomfortable, but do not expect to be totally pain-free. The staff will teach you the pain scale to better assess your pain levels.

After Surgery

Daily Schedule

Your surgeon or somebody from his/her team will see you on a daily basis while you are in the hospital.

Visitors are welcome, preferably late afternoons or evenings, not during therapy sessions. Some patients go home the day after surgery but many go home after 2 to 3 nights in the hospital. There are many different procedures that your surgeon performs, please ask your surgeon for the specifics.

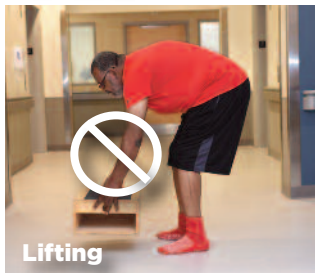
Spine Precautions

After surgery, you will slowly increase what you do each day. It is also important to plan time to rest. This will help you recover. You will also

need to follow spine precautions.



Bending



Lifting



Twisting

You can use the pneumonic BLT:

- **B:** No Bending
- **L:** No Lifting
- **T:** No Twisting, pulling, pushing, or reaching

- Do not pick up anything heavier than 5 pounds (unless instructed by surgeon)
- Women's purses can weigh more than 5 pounds
- A package of sugar weighs 5 pounds
- A gallon of milk can weigh 9 pounds
- Do not pick up young children.

Discharge

You must arrange for an adult driver to take you home after your surgery. No patients who receive anesthesia can drive, or take county transportation or taxi service home. Taxi service is only acceptable if you are accompanied by an adult (over 18 years of age).

It is important for you to make plans before surgery for care at home. Many patients should expect to go directly home. Understanding your plan for discharge is important in the recovery process. You can expect help from the team to develop a plan that meets your particular needs. Many patients should expect to be able to go directly home, as is usually best to heal in the privacy and comfort of your own home.

A patient's stay in a rehab facility must be done following the guidelines established by Medicare or other insurers.

You will either meet the criteria to go to a rehab facility or your insurance company may recommend that you return home with other care arrangements.

Also keep in mind that insurance companies do not get involved in social issues, such as lack of caregiver, animals, etc. These are issues you will have to address before admission. Again, it is important for you to make plans before surgery for care at home after surgery.

The Social Worker and Case Manager will work with you, and your family, to set up the visiting nurse to come to the house within the first 24 hours after you get home. If needed, they will also set up physical therapy to come to your home, and help you get any equipment such as a rolling walker or 3-in-1 commode for home.



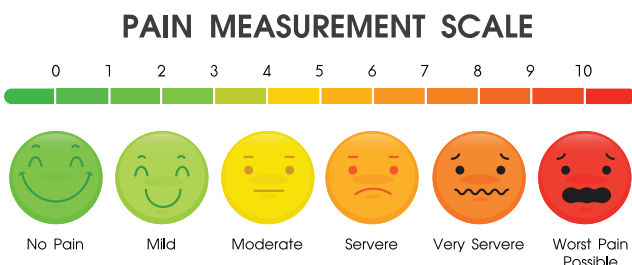
Pain Management

Understanding Pain

After surgery you will most likely be in pain. Our goal is to manage your pain, not get rid of your pain completely. All patients have a right to have their pain managed. Pain can be chronic (lasting a long time) or intense (breakthrough). Pain can change through the healing process.

Your Role in Pain Management

Using a pain scale to describe your pain will help the team understand your pain level. If “0” means you have no pain and “10” means you are in the worst pain imaginable, how would you rate your pain? With good communication about your pain, the team can make changes to make you more comfortable. Try to relax, when you are relaxed medication works better.



Multimodal Analgesia

Pain can come from multiple nerve pathways in your body. To help manage your pain after surgery your surgeon may use pain control called multimodal analgesia.

Multimodal analgesia means that you will get two or more medications that lessen pain and when used together, they can block more pain signals. Multimodal analgesia is focused on lowering your pain after surgery to help you heal more quickly and easily.

One of the biggest goals of multimodal analgesia is to lessen your need for opioid medications or narcotics. Opioid medications include drugs that come from the opium plant (such as morphine) and also man-made drugs designed to have similar pain reducing effects (oxycodone and hydrocodone).

Opioid medications provide pain relief, but taking them regularly can lead to physical dependence and, sometimes, addiction. Using less opioid medication can help lower the chance of dangerous side effects and also other side effects (such as sleepiness, nausea, vomiting, and constipation) that may be unpleasant for you and may disturb your ability to participate in physical therapy.

Multimodal analgesia includes medications that you take before, during, and after surgery. Some of these medications may be familiar to you; for example, acetaminophen (Tylenol). Opioid medications are also used, especially when other medications do not give you enough pain relief.

What can I do to lessen the pain?

There are many ways to lessen pain. Work with your health care team to find the best ways.

- Ice
 - Ice is a good way to lessen pain.
 - Ice should be used right after surgery around the incision.
 - Ice should NEVER be placed directly on bare skin. Keep ice packs wrapped in a towel or placed over clothing.
 - Ice for 20 minutes at a time. Ice should be off at least 20 minutes.
- Stay Active
 - Get up and move around as instructed
 - Change positions to relieve pain
- Relaxation
 - Rest – make sure you are getting enough, good quality sleep
 - Meditation – this can help focus your mind and let you relax
 - Music – Find music that is calming or enjoyable to you. This can also help with relaxation
 - Breathing Exercises – Slow, deep breathing can reduce stress and pain

Deep Breathing and Coughing

To prevent potential problems such as pneumonia, it is important to understand and practice breathing exercises. Techniques such as deep breathing, coughing, and using an Incentive Spirometer may also help you recover more quickly.

Breathing Exercises

- Perform in an upright, sitting/leaning forward/standing position, shoulders relaxed
- Breathe in deep and slow as much as possible through nose or mouth
- Hold breath for 2-5 seconds
- Then breathe air out slowly through pursed lips (like you are blowing out birthday candles) as a normal relaxed expiration
- 10-15 consecutive breathes repeated for 3 sets- 60 sec pause between each set
- Cough during pause to mobilize secretions if necessary

Perform hourly after surgery

To Help You Cough

- Take a slow deep breath. Breathe in through your nose and concentrate on filling your lungs completely.
- Breathe out through your mouth and concentrate on your chest emptying completely.
- Repeat with another breath in the same way.
- Take another breath, but hold your breath and then cough hard. When you cough, focus on emptying your lungs.
- Repeat all steps twice.

Constipation Management

Constipation can be uncomfortable and may prevent eating a healthy diet. Constipation can be caused by

- Not drinking enough fluids
- Use of opioids
- Decreased activity or mobility

To help prevent constipation, you should use a combination of things

- Drink plenty of fluids, up to 8 glasses of water per day. (soda, coffee, and alcohol do not count towards your daily water intake)
- Decrease the use of opioid pain medicine
- Stay active, get up and move as you are able
- Eat prunes or drink prune juice. These are natural laxatives. Try this before medicines.

If you are still constipated, a stool softener or laxative may help. If you reach a point when you stop passing gas, this may be a medical emergency.

At Home

Patient Experience Survey

From the time of discharge to perhaps a year later, you may be asked to participate in patient satisfaction surveys. These surveys, both from the hospital and from the Spine Surgery Program, are your chance to tell us what you feel went well and what can be better.

Caring for Yourself at Home

- Gradually wean yourself from prescription medication to a non-prescription pain reliever. Ask your physician for narcotic alternatives.
- Change your position every 45 minutes.
- Try not to nap too much: While you are recovering, try not to nap too much during the day so that you will sleep better at night.
- Body Changes: Your appetite may be poor. Drink plenty of fluids to keep from getting dehydrated. Your desire for solid food will return.
- You may have difficulty sleeping, which is normal. Do not sleep or nap too much during the day.
- Your energy level will be decreased for at least the first month.
- Pain medication that contains narcotics promotes constipation. Use stool softeners or laxatives, if necessary.

What If I Live Alone?

You may return home and receive help from a relative or friend, or plan to stay at their home for the first few days. Some patients are candidates for a home health nurse to visit them at home for a short while. Please discuss this with your case manager after surgery.

Dressing Change Procedure

Each patient is different, and each surgeon has his own preferences, please follow the instructions of your discharge nurse in the hospital. Don't forget to wash your hands before caring for your wound.

Signs of Infection

- Increased swelling and redness at incision site
- Change in color, amount, or odor of drainage
- Increased pain at surgery location
- Fever greater than 101.5 degrees

What Can I Do to Prevent Infection?

- Sleep in clean pajamas and wear clean clothes at home. This makes sure fabric that is close to your incision is clean
- Keep pets off of your bed or chairs and away from your incision
 - Pets can carry germs
 - Pets like to lick wounds so keep your incision covered when around them
 - Be sure to wash your hands after touching pets

Signs of Blood Clots in Legs

- Swelling in thigh, calf, or ankle that does not go down with elevation.
- Pain, heat, and tenderness in calf, back of knee or groin area.

NOTE: blood clots can form in either leg.

To Help Prevent Blood Clots

- Perform ankle pumps
- Walk several times a day
- Take your blood thinners as directed

Pulmonary Embolus

An unrecognized blood clot could break away from the vein and travel to the lungs. This is an emergency and you should CALL 911 if suspected.

Signs of a Pulmonary Embolus

- Sudden Chest Pain
- Difficult and/or rapid breathing
- Shortness of breath
- Sweating
- Confusion

Prevention of Pulmonary Embolus

- Prevent blood clot in legs
- Recognize if a blood clot forms in your leg and call your physician promptly

Postoperative Safety and Avoiding Falls

Kitchen

- Use a mop and long-handled brushes.
- Plan ahead! Gather all your cooking supplies at one time. Then, sit to prepare your meal.
- Place frequently used cooking supplies and utensils where they can be reached without too much bending or stretching. To provide a better working height, use a high stool, or put cushions on your chair when preparing meals.

Avoiding Falls

- Pick up throw rugs and tack down loose carpeting. Cover slippery surfaces with carpets that are firmly anchored to the floor or that have non-skid backs.
- Be aware of all floor hazards such as pets, small objects, or uneven surfaces.
- Provide good lighting throughout your home.
- Install nightlights in the bathrooms, bedrooms, and hallways.
- Keep extension cords and telephone cords out of pathways. Do NOT run wires under rugs, this is a fire hazard.
- Do NOT wear open-toe slippers or shoes without backs. They do not provide adequate support and can lead to slips and falls.
- Sit in chairs with arms. It makes it easier to get up.
- Rise slowly from either a sitting or lying position to avoid getting light-headed.
- Do not lift heavy objects for the first three months and then only with your surgeon's permission.

Driving

- you can drive when you can comfortably get in and out of a car and no longer taking opioids.
- It will take at least 2 weeks or possibly longer before you are able to drive
- Please arrange in advance for transportation during this time

Sitting

- Limit sitting to 30-40 minutes at a time
- Avoid soft sofas, deep chairs, recliners, and chairs with wheels
- Sit in a chair that has back support and armrests

Bathing

- Use non-slip bathmat on bathroom floor and in shower/tub
- Sit on a shower seat/chair
- Use grab bars for balance
- Do not shower if your drain is in place

Intimacy after Surgery

- Ask your doctor when it is safe to have sex
- Ask what precautions you should follow
- You may need to try new positions. Some positions are more comfortable and safer

Postoperative Recovery and Rehabilitation

Life after Surgery

- Be patient with recovery.
- May take 3 months to a year to get desired result
- Be positive. A good attitude leads to better and faster recovery.
- Do not stop doing things if you still have pain. Find a less painful way to do it.
- Less activity may cause stiffness and more pain.

Following Up With Your Surgeon

You will need to follow-up with your surgeon 2 to 4 weeks after your surgery. Please call your surgeon's office and make an appointment if you have not already done so.

Important Things to Know

- Signs of infection
 - Increased swelling and redness at incision site
 - Change in color, amount, odor of drainage
 - Increased pain in knee
 - Fever greater than 101.5 degrees
- Signs of blood clots in legs
 - Swelling in thigh, calf, or ankle that does not go with elevation.
 - Pain, heat, and tenderness in calf, back of knee or groin area.

NOTE: blood clots can form in either leg.

- To help prevent blood clots
 - Perform ankle pumps
 - Walk several times a day
 - Take your blood thinners as directed
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- Signs of a Pulmonary Embolus
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- Prevention of Postoperative safety and avoiding falls - Kitchen
 - Do NOT get down on your knees to scrub floors.
 - Use a mop and long-handled brushes.
 - Plan ahead! Gather all your cooking supplies at one time. Then, sit to prepare your meal.
 - Place frequently used cooking supplies and utensils where they can be reached without too much bending or stretching.

To provide a better working height, use a high stool, or put cushions on your chair when preparing meals.

References

1. Low Back Surgery Exercise Guide - OrthoInfo - AAOS. OrthoInfo. <https://orthoinfo.aaos.org/en/recovery/low-back-surgery-exercise-guide/>. Accessed June 9, 2019.
2. Brad B&. YouTube. <https://www.youtube.com/watch?v=66Opqi47OEs>. Published February 3, 2016. Accessed June 9, 2019.
3. National Association of Orthopedic Nurses (2018) Post-Operative Spine Patient Education Manual file:///C:/Users/s0489458/Downloads/PostoperativeSpine_Manual%20-%20FINAL%202019.pdf
4. Walk to a Speedy Recovery After Surgery. Southeastern Spine Institute. <https://www.southeasternspine.com/walk-to-a-speedy-recovery-after-surgery/>. Published July 27, 2016. Accessed June 9, 2019.

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