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# Lumbar Spine Guidebook

## Section One:

## Before Surgery

### Welcome!

We are pleased you have chosen Orange Coast Medical Center's Spine Health Center to have spine surgery.

The goal of lumbar spine surgery is to:

- Relieve pain
- Restore independence
- Return to an active lifestyle

Some patients having lumbar spine surgery may be able to walk or even go home the day of surgery. Generally, patients can return to driving in one to two weeks; to sedentary jobs and activities in three to four weeks; and to vigorous physical activities in six to 12 weeks, once cleared by a surgeon.

## Using the Guidebook

The Guidebook will assist you with:

- What to expect
- What you need to do
- How to care for yourself after spine surgery

Your doctor, nurse or therapist may add or change any of the recommendations. Always use their recommendations first and ask questions if you are unsure.

## Spine Health Center Overview

Program features include:

- Nurses and therapists trained to work with spine surgery patients
- Private rooms
- Emphasis on individual care
- Family and friends as "coaches"
- Spine Care/Program Coordinator who facilitates discharge planning



## Your Spine Care Coordinator

The Spine Care Coordinator is available before your surgery, as well as post-discharge to answer questions about your spine surgery or the recovery process.

The Spine Care Coordinator will:

- Assess your home needs and caregiver availability
- Coordinate your discharge plan to home or a sub-acute facility
- Act as your liaison throughout the course of treatment
- Answer questions and coordinate your hospital care with Spine Health Center team members
- Conduct a pre-operative class for patients undergoing lumbar fusion surgery

This class is ideally suited for patients who are undergoing anterior/posterior lumbar fusion, as these surgeries generally require a longer hospital stay. The Clinical Spine Director can be reached at (714)378-7722 for any additional questions.

# Lumbar Spine Guidebook

## Medication List

Please fill out the Medication List with the requested information.

Name:		Primary Care Doctor:	
Medication Name/Dosage	Instructions	Reason for Therapy	Duration
What is the name of your medication? What is the dosage?	When and how do you take this medication?	Why are you taking this medication?	How long have you been taking this medication?

## Get Started - Four to Six Weeks Before Surgery

### Contact Your Insurance Company

Before surgery, you should contact your insurance company to find out if pre-authorization, pre-certification, a second opinion or a referral form is required. Failure to clarify these questions may result in a reduction of benefits or a delay of surgery. This is especially important if your spine problem is due to an injury at work.

If you are a member of a health maintenance organization (HMO), you will need to call your HMO once your procedure has been scheduled to arrange for pre-admission lab studies that must be completed.

### Billing for Service

After your procedure, you will receive separate bills from the anesthesiologist, hospital and if applicable, surgical assistant, radiology and pathology departments. Please contact your insurance provider if you have any questions about coverage.

### Pre-register

After your surgery has been scheduled, our pre-admission staff nurse and registration representative will call you to gather information. You will need to have the following information ready when you are contacted:

- Patient's full legal name, address (including county) and phone number
- Religion
- Marital status
- Social Security number
- Name of insurance holder; his/her address and phone number; and his/her work address and work phone number
- Name of insurance company, mailing address, policy and group number
- Patient's employer, address, phone number and occupation
- Name, address and phone number of nearest relative
- Name, address and phone number of someone to notify in case of emergency — this can be the same as the nearest relative
- Name of your Primary Care Physician (PCP) if applicable
- Whether or not you accept blood

# Lumbar Spine Guidebook

## Financial Responsibility

As a courtesy, we will be contacting your insurance company to verify insurance coverage and eligibility. Our financial counselor will call to notify you of any out-of-pocket expenses you are responsible for prior to services. Out-of-pocket expenses may consist of an annual deductible, co-insurance, and/or co-payment.

## Medical Clearance

Your surgeon will advise you about your need to visit other doctors or specialists. Additional medical clearance might be needed. Follow all instructions and keep all appointments for doctor visits and lab or x-rays tests.

## Laboratory Tests

You should also receive a laboratory-testing letter from your surgeon. Follow the instructions in this letter. The primary care doctor or physician's assistant may order additional testing.



## Medications That Increase Bleeding

Your doctor should tell you when to stop any medications before surgery, such as anti-inflammatory medications like aspirin, Motrin®, Naproxen, Vitamin E, etc. These medications may increase bleeding. If you are taking a blood thinner, you will need instructions for continuing or stopping the medication.

## Herbal Medicine

Herbal medicines can interfere with other medicines. Check with your doctor to see if you need to stop taking your herbal medicines before surgery.

Examples of herbal medications include echinacea, ginkgo, ginseng, ginger, licorice, garlic, valerian, St. John's wort, ephedra, goldenseal, feverfew, saw palmetto and kava-kava.

## Health Care Decisions

Advance Medical Directives communicate the patient's wishes regarding healthcare. There are different directives. Consult your attorney concerning the legal implications of each.

- **Living Wills** explain your wishes for healthcare if you have a terminal condition, irreversible coma and are unable to communicate.
- **Appointment of a Healthcare Agent** (sometimes called a Medical Power of Attorney) lets you name a person (your agent) to make medical decisions if you become unable to do so.
- **Healthcare Instructions** are your choices regarding use of life-sustaining equipment, hydration, nutrition and pain medications.

If you have an Advance Medical Directive, bring copies of the documents with you to the hospital.



# Lumbar Spine Guidebook

## Stop Smoking

If you smoke, stop using tobacco products. The tar, nicotine and carbon monoxide found in tobacco products have serious adverse effects on blood vessels and impair the healing of wounds and bone grafts. Continued tobacco use damages the other discs in your spine, leading to disease at other levels. And, smokers typically experience a greater degree of pain than non-smokers.

### Smoking:

- Delays your healing process
- Reduces the size of blood vessels and decreases the amount of oxygen circulating in your blood
- Can increase clotting which can cause heart problems
- Increases blood pressure and heart rate

If you quit smoking before surgery, you will increase your ability to heal. If you need help quitting, ask about hospital resources.

### When you are ready:

- Decide to quit
- Choose the date
- Limit the area where you smoke; don't smoke at home
- Throw away all cigarettes and ashtrays
- Don't put yourself in situations where others smoke
- Reward yourself for each day without cigarettes
- Remind yourself that this can be done – be positive!
- Take it one day at a time – if you slip, get back to your decision to quit
- Check with your primary care doctor if you need products like chewing gum, patches or prescription aids

***Smoking can impair oxygen circulation to your healing spine.***

***Oxygen circulation is vital to the healing process.***

<sup>1</sup>Smoking Threatens Orthopedic Outcomes. Negative effects should prompt orthopedists to address the issue with patients. S. Terry Canale, MD; Frank B. Kelly, MD; and Kaye Daugherty <http://www.aaos.org/news/aaosnow/jun12/cover2.asp> Motrin is a registered trademark of McNeil-PPC, Inc. All rights reserved by trademark owner.

# Lumbar Spine Guidebook

## Pre-operative Exercises

You should always consult with your physician or physical therapist before embarking on an exercise program. All of these exercises should be pain-free. If any exercise causes pain, discontinue the exercise and consult with your physician or physical therapist before continuing the program.

## Start Pre-operative Exercises

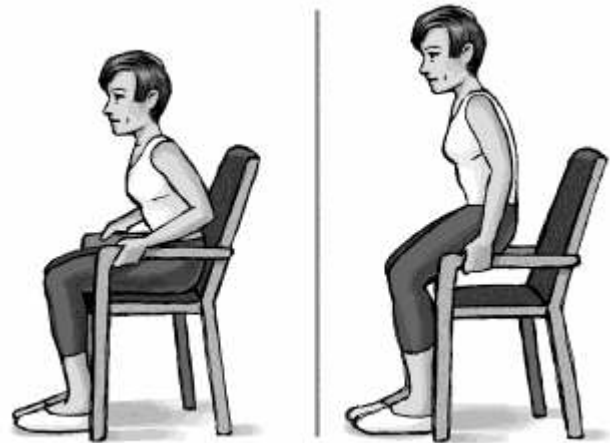
Exercise is important in the rehabilitation process following spine surgery, but it is imperative that you participate in a pre-operative exercise program as well. The exercises below help to strengthen and condition your muscles in preparation for surgery and the post-rehabilitation phase. To enhance your recovery from surgery, try to incorporate these exercises and aerobic exercise (walking, water aerobics and recumbent bicycle) into your daily routine. Past patients have mentioned how helpful it was to take time to strengthen muscles in their arms and legs prior to surgery.

1. Chair Push-up
2. Long Arc Quad
3. Abdominal Sets (Tummy Tucks)
4. Quad Sets

### 1. Chair Push-up

Sit in chair. Use arms (not legs) to push body up from chair; try to hold for 5-10 seconds. Keep elbows slightly bent and feet on floor. Return to chair slowly.

**Perform 10 chair push-ups, 2x/day.**



### 2. Long Arc Quad

Sit in chair with knees bent to 90 degrees. Straighten leg. Hold 5 – 10 seconds. Return to start position and repeat.

**Perform 3 sets of 10 long arc quads every other day. Rest for 1 minute between sets.**



# Lumbar Spine Guidebook

## 3. Abdominal Sets (Tummy Tucks)

Lie flat on back with knees bent. Tighten stomach (abdominal) muscles by drawing belly button toward spine. Feel abdominal muscles tighten across front. Hold position and continue to breathe comfortably for 10-15 seconds. If you can't breathe comfortably, then you are tightening the muscles too much.

**Perform 20 tummy tucks, 2x/day.**



**NOTE:** This exercise is the beginning of a lifelong challenge of being able to keep abdominal muscles tightened all day long. Strengthened muscles provide continuous support for spine.

## 4. Quad Sets

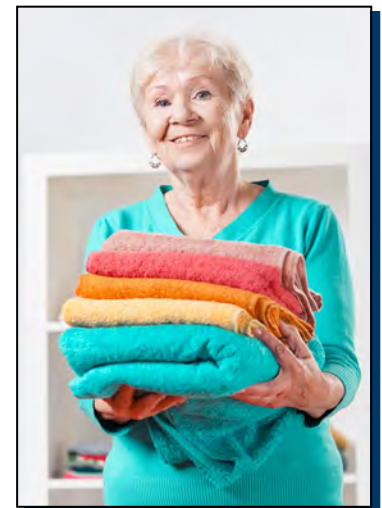
Lie flat on back with one leg straight. Tighten quadriceps muscles (muscles on front of thigh), pressing back of knee into the bed and hold as indicated for 10-15 seconds. Do not hold breath. Repeat with other leg.

**Perform 20 quad sets, 2x/day.**



## Prepare Your Home

- De-clutter your home. Put away area rugs that may be a tripping hazard.
- Shop ahead! Have frozen dinners available to pop into the microwave and paper plates to limit washing. Have plenty of liquids available. Pain medications can give you dry mouth.
- Complete yard work and mowing.
- Arrange for neighbors/family to collect mail and newspapers.
- Change your bed with fresh linens.
- Place nightlights in bedrooms, hallways and bathrooms.
- Temporarily place essential and frequently used items at counter level in the kitchen or bathroom.
- Pay any current bills so you do not have to worry later.
- Line up support, especially if you live alone. Arrange for friends to call on certain days or stop by to make sure you don't need any assistance.
- An arm chair with an armrest is needed, but a chair that offers support and comfort is best.



# Lumbar Spine Guidebook

## Pets

- Have help the first days after surgery to keep food and water available for pets.
- Plan for a dog walker during the first week (at the least). You do not want to lose your balance or be jerked by your excited canine friend!
- If you have cats, have someone assist with the litterbox so you do not have to bend to clean it. It is recommended that you do not move the cat litter box as they may start spraying which would be more work for you.

## Breathing Exercises

To prevent problems such as pneumonia, practice breathing exercises using the muscles of your abdomen and chest.

### Deep Breathing

- Breathe in through your nose as deep as you can.
- Hold your breath for 5 to 10 seconds.
- Breathe out as if you were blowing out a candle. Notice your stomach going in. Breathe out for 10 to 20 seconds.
- Take a break. Repeat the exercise 10 times.

### Coughing

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

*Techniques such as deep breathing, coughing and using an Incentive Spirometer may help prevent respiratory complications after surgery.*

# Lumbar Spine Guidebook

## Surgery Timeline

### Four Weeks Before Surgery

#### Start Vitamins with Iron

You may be instructed to take multivitamins, as well as iron. Iron helps build your blood count which may help prevent the need for a blood transfusion.

### Ten Days Before Surgery

#### Pre-operative Visit to Surgeon

Your surgeon may ask to come in for a visit before surgery. This is a final check-up and time to ask any questions. Some patients with acute disc herniation may have a shorter time between the visit and surgery. You should schedule your 10-day and six-week post-operative visits at this time.

### Three Days Before Surgery

#### Chlorhexidine Shower

You might be provided Chlorhexidine (Hibiclens) or special cleansing soap; follow the instructions. If you have not received this soap, take a good scrubbing shower the evening before surgery with regular bar soap. Pay special attention to skin folds.

### Day Before Surgery

#### Determine Your Arrival Time at the Hospital

The pre-op nurse will call you the day before surgery with the details on where to check-in and what time to come to the hospital.

### Night Before Surgery

#### Do Not Eat or Drink

Do not eat or drink anything, EVEN WATER, after midnight unless otherwise instructed to do so. If you have been instructed to take medication the morning of surgery, do so with a small sip of water.

# Lumbar Spine Guidebook

## Day of Surgery

Come to the hospital two hours before surgery to give staff time to start IVs, prep and answer any questions. It is important you arrive on time as occasionally the surgical time is moved up.

### Items to Take to the Hospital

- Patient Guidebook
- Personal hygiene items (toothbrush, deodorant, razor, etc.)
- Loose fitting clothes (shorts, tops)
- Slippers with non-slip soles, flat shoes or tennis shoes
- Loose-fitting clothes for the ride home
- Battery-operated items (NO electrical items)
- Favorite pillow with pillowcase in pattern/color so it will not end up in hospital laundry. Use pillow during your stay and for the ride home.
- Any braces for your back or for walking
- Insurance card and co-payment (if applicable)
- Cane or walker, if you already have one

### Special Instructions

- You will be instructed by your surgeon or pre-screening nurse which of your daily medications to take or omit the morning of surgery.
- Leave jewelry, valuables and large amounts of money at home.
- Remove makeup before procedure.
- You can leave on nail polish.

## Frequently Asked Questions (FAQs)

### Questions About Lumbar Laminectomy

#### What is wrong with my back?

You have a “pinched nerve.” This may be produced by one or more herniated discs and/or areas of arthritis in your back. The discs are rubbery shock absorbers between the vertebrae and are close to nerves that originate in the spine and then travel down to the legs. If the disc is damaged, part of it may bulge (herniate) or even burst free into the spinal canal, putting pressure on the nerve and causing leg pain, numbness, or weakness. Bone spurs associated with arthritis may do the same thing.

#### What is required to fix the problem?

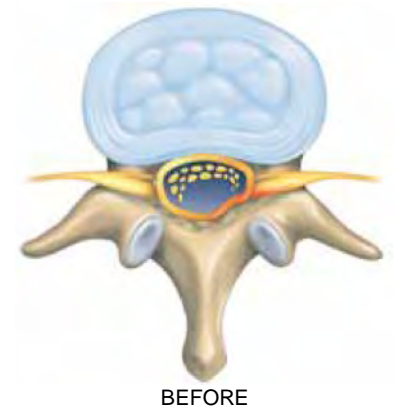
The discs or bone spurs pressing on your nerve must be removed. This is done by making an incision (usually two or three inches long) in the middle of your lower back, moving the muscles covering your spine to the side, and making a small window into your spinal canal. The nerve is exposed, moved aside and protected; and the protruding disc or bone spur is then removed. This decompresses the nerve and, in most cases, leads to rapid improvement in nerve pain, numbness, and/or weakness. Sometimes the abnormality may be more extensive, extending over several disc segments, requiring a longer incision for decompression.

#### Who is a candidate for lumbar laminectomy and when is it necessary?

The primary reason for this operation is pain that is intolerable. Sometimes, increasing nerve dysfunction (particularly weakness) or loss of bowel or bladder control may make the surgery necessary even if pain is not severe. In most cases, nerve dysfunction is not severe and pain may be controlled by non-surgical means. If this doesn't happen and if the pain and subsequent disability become intolerable, surgery may be a reliable way to solve the problem.

#### Who performs this surgery?

Both orthopedists and neurosurgeons are trained in spinal surgery and both specialists may perform this surgery. It is important that your surgeon specialize in this type of procedure.



BEFORE



AFTER

# Lumbar Spine Guidebook

## **Is my entire disc removed?**

No, only the ruptured part and any other obviously abnormal disc material are removed. This generally amounts to a small portion of the entire disc.

## **Frequently Asked Questions About Lumbar Fusion**

### **What is wrong with my back?**

You have one or more damaged discs and/or areas of arthritis in your back. This produces pain, and may produce abnormal motion, or misalignment of your spine. Discs are rubbery shock absorbers between the vertebrae, and are close to nerves that travel down to the legs. If the disc is damaged, part of it may bulge or even burst free into the spinal canal, putting pressure on the nerve and causing leg pain, numbness, or weakness.

### **What is required to fix the problem?**

Your condition may require both a nerve decompression (freeing the nerves from pressure) and a spinal fusion. Discuss options with your surgeon.

### **What is spinal fusion?**

A fusion is a bony bridge between at least two other bones, in this case two vertebrae in your spine. The vertebrae are the blocks of bone which make up the bony part of the spine. Normally each vertebrae move within certain limits in relationship to the other vertebrae. With spinal disease, the movement may become excessive and painful, or the vertebrae may become unstable and misaligned, putting pressure on the spinal nerves. In cases like this, surgeons try to build bony bridges between the vertebrae using pieces of bone, which is called a bone graft. The bone may be obtained either from the patient (usually from the pelvis) or from a bone bank. There are advantages and disadvantages to either source. The bone graft is either laid next to the vertebrae or actually placed between the vertebral bodies (the rubbery disc that normally lies between the vertebrae must be removed). In either case, the bone graft has to heal and fuse to the adjacent bones before the fusion becomes solid. Spine surgeons often use screws and rods to protect the bone graft and stabilize the spine while the fusion heals.





# Lumbar Spine Guidebook

## **How is the operation performed?**

A four- to five-inch incision is made in middle of lower back. Muscles supporting the spine are pushed aside temporarily. Spinal nerve is exposed, moved aside and protected, and ruptured disc or bone spur is removed to loosen the nerve. Fusion is performed as described above. Wound is then closed and dressings are applied. Operation typically takes a minimum of three hours and may be longer, depending on complexity of problem. Sometimes spinal fusion is performed with an anterior approach. In this case, the surgeon would make a four- to five-inch incision in lower abdomen, gently move the internal organs aside, and proceed with surgery as described above.

## **Who is a candidate for lumbar fusion, and when is it necessary?**

When back and nerve problems cannot be corrected in a more simple procedure and pain persists at an unacceptable level, it may be necessary to do a fusion. Consult your surgeon to determine options. Some conditions which require spinal fusion are discussed in “What is spinal fusion?”.

## **Who performs this surgery?**

Both orthopedic surgeons and neurosurgeons who specialize in spine surgery may perform this procedure, either individually or as a team.

## **Could I be paralyzed?**

Neurologic injury with spine surgery is possible, but not likely. The possibility of catastrophic injury such as paralysis, impotence, or loss of bowel or bladder control is also unlikely, but not impossible. Injury to a nerve root with isolated numbness and/or weakness in the leg is possible.

## **Are there other risks involved?**

There are general risks with any type of surgery. These include, but are not limited to, possibility of wound infection, uncontrollable bleeding, collection of blood clots in wound or in veins of leg, abdominal problems, pulmonary embolism (movement of a blood clot to lung), heart attack, or stroke. These events rarely happen, especially to a generally healthy patient. Rarely, death may occur during or after any surgical procedure.

## **What are my chances of being relieved of my pain?**

The goal of surgery is to relieve pain, especially relief from nerve symptoms or leg pain. Relief of back pain is also possible, although may be less predictable.

## **Will my back be normal after surgery?**

No. Even if you have excellent relief of pain, the spine is not completely normal after a fusion. Stiffening one segment of the spine with fusion may put additional strain on other areas. Other discs may have started to wear out. Even if they aren't causing you pain now, they may do so in the future. For these reasons, you may have continued back pain. However, most people can resume almost all of their normal activities after their fusion has healed. Your surgeon can discuss this with you in detail.

## Section Two:

# At the Hospital

## Understanding Anesthesia

### Anesthesiologists

The Operating Room, Post Anesthesia Care Unit (PACU) and Intensive Care Unit at the hospital are staffed by qualified anesthesia providers. Each practitioner has privileges to practice at Orange Coast Medical Center.

### Type of Anesthesia

Spine surgery requires the use of general anesthesia which provides loss of consciousness. You will be completely asleep. The anesthesia provider will speak to you before your surgery and inform you of the anesthesia support that will be provided.

### Side Effects

Your anesthesia provider will discuss the risks and benefits associated with each anesthetic option, as well as complications or side effects that can occur. You will be given medications to treat nausea and vomiting which sometimes occurs with the anesthesia. The amount of discomfort you experience after surgery will depend on several factors, including the type of surgery. Your discomfort should be minimal, but do not expect to be totally pain free. Staff will teach you the pain scale to assess your pain level.

***Requests for a  
specific  
anesthesiologist  
should be submitted  
in advance through  
your surgeon's  
office.***

## Understanding Pain

Effective pain management involves a shared understanding, between patients and the healthcare team, of the types of pain you may experience. Pain can be described by when it starts and how long it lasts as well as by its medical origin. Listed below are descriptions of several types of pain that will help you provide good information to the healthcare team as they strive to manage your pain after surgery.

### Types of Pain

- **Acute Pain** - Sudden onset of pain such as that which occurs with an injury or surgery; usually lasts a short time and gets better quickly
- **Chronic Pain** - Pain that lasts long after the initial cause of the pain (i.e. injury or other trauma); this pain can be more challenging to manage
- **Incisional Pain** - Often described as a feeling of soreness or pressure
- **Nerve Pain** - Often described as numbness and tingling, a shooting pain or a hot pain
- **Muscle Spasm** - Often described as a tight, grabbing sensation that makes it uncomfortable to move

### Treatment of Pain

Your surgeon and healthcare team will work closely together to manage your pain and provide comfort to ensure you are able to eat, sleep and walk after surgery.

Your surgeon will choose the best medication(s) to provide you with the most comfort possible.

Medications may be given to you as a pill, an injection, or through your IV. If you are receiving IV medications, the goal is to switch to oral pain medications within 12-24 hours. This will decrease the risk of some common side-effects from IV pain medications such as sedation and nausea.

Your surgeon may order different types of medications to manage your pain. These might include pain medications like acetaminophen (Tylenol®), non-narcotics (like Ultram®), narcotics (like Percocet®), muscle relaxants (like Flexeril®) as well as other medications to help relieve pain.

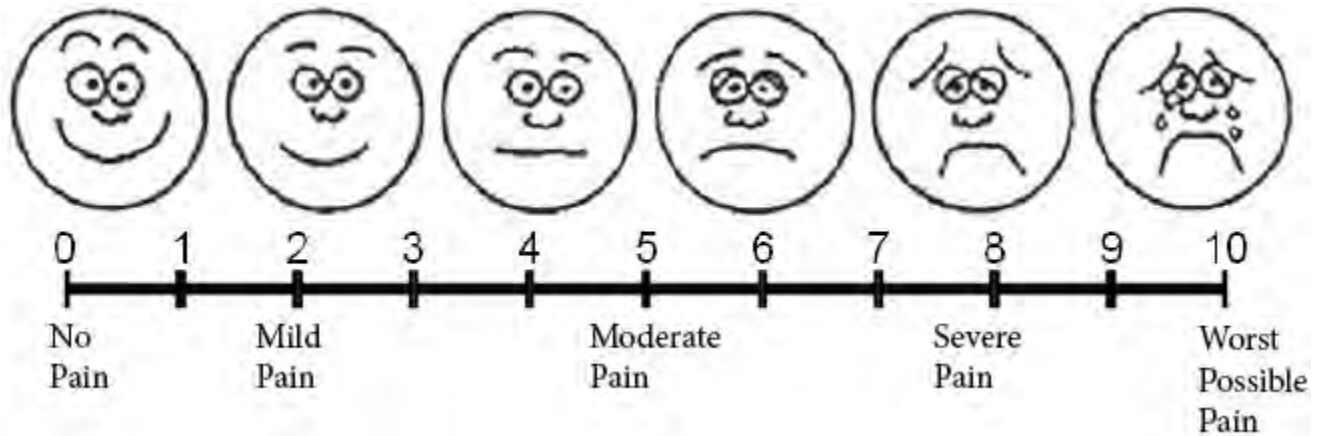
In addition to medications, your nurses or physical therapists may also use the following measures to help increase your comfort:

- Cold therapy (ice or gel packs)
- Positioning
- Walking
- Relaxation Activities

# Lumbar Spine Guidebook

## Pain Scale

Using a number to rate your pain can help the healthcare team understand and manage your pain. “0” means no pain and “10” means the worst pain possible. With your good communication, the team can make changes to your medication to make you more comfortable.



## Your Role in Pain Management

Throughout your hospital stay, your bedside nurses will assess your physical condition and look for signs of pain. Using the pain scale above, notify your nurse as you feel your pain level increase to the mid-range of 4 or slightly above. It is generally easier to reduce pain at these levels than it is to reduce pain that reaches extreme levels such as a pain score of 9 or 10. Remember, you will have pain after surgery. Keep a realistic pain management goal in mind and work with the nurses to stop the pain from increasing before it gets out of control.

## Hospital Care - What to Expect

### Before Surgery

- Your anesthesia provider will review your information to evaluate your general health. This includes your medical history, laboratory test results, allergies and current medications.
- Intravenous (IV) fluids will be started and pre-operative medications may be given.
- You will be fitted with compression stockings.
- Before you receive anesthesia, monitoring devices will be attached (blood pressure cuff, EKG and others).

### During Surgery

- The anesthesiologist will manage vital signs — heart rate and rhythm, blood pressure, body temperature and breathing, as well as monitor your fluid and need for blood replacement if necessary.

### After Surgery

- You will be taken to the Post Anesthesia Care Unit (PACU). Pain control will be assessed and vital signs will be monitored.
- You will then be taken to the Surgical Unit.
- As expected after surgery, discomfort may occur, so you may receive pain medication through your IV.
- ***Only one or two very close family members or friends should visit on surgery day. Please plan to leave young children at home.***
- There will be a dressing over your back incision.
- At some point on this day, you will be assisted out of bed to walk or sit in a chair. Mobility helps relieve discomfort. You are free to eat soft foods.
- Physical or Occupational therapy will begin the day of surgery.
- We will instruct you on breathing exercises, ankle pumps, use of compression stockings and benefits of ambulation.

### Post-operative Day

- Each day generally starts with blood work obtained early in the morning.
- A post-op x-ray of your lumbar spine may be needed to allow your surgeon to see the surgical area before you are discharged.
- Intravenous (IV) pain medication will likely be stopped and oral pain medication will begin.
- Physical and occupational therapy will continue.
- Home Health may be ordered by your physician upon discharge.

## Discharge Options

### Going Directly Home

When patients are ready for discharge, certain criteria are generally met.

Patients are:

- Walking independently
- Eating and drinking well
- Taking oral medication to control discomfort

The surgeon will let you know what to expect for your hospitalization and if you will be able to go home. Discuss any concerns you have about being able to take care of yourself once you go home.

While most patients go directly home, sometimes the services of home physical therapy or sub-acute rehabilitation is needed. If so, the Spine Care Coordinator will make these referrals for you.

Do not go home alone. Please have someone with you to be your coach for the next two to three days. This can be a friend or family member who can help you with your compression stockings and other needs. This caregiver will also help with meals and household activities. During these first few days at home, you should concentrate on your recovery. If support equipment (rolling walker, bedside commode) is needed, it will be ordered for you, with your consent, either before admission or before you are discharged.

### Going to a Sub-acute Rehab Facility

Patients who desire sub-acute rehabilitation prior to returning home must meet their insurance company's specific criteria before approval can be granted. If you do not meet these criteria, but strongly wish to pursue rehab, you may have the option to pay privately for your stay.

The requirements for Medicare patients are somewhat different. Medicare patients who are considering a rehab stay must first satisfy a three-night stay in the hospital. This three-night stay must be due to the need for continued medical care. If you meet these conditions, Medicare will cover all or part of the stay at the after-hospital care facility.

If you are considering rehab, it is strongly recommended that you also develop an alternate plan in the event you do not meet the insurance criteria.

## Frequently Asked Questions (FAQs)

### Questions About Lumbar Laminectomy

#### **How long will I be in the hospital?**

Patients who have undergone a Laminectomy are usually out of bed within an hour or two after their operation, and some can go home on the day of surgery; others on the following day.

#### **Will I need a blood transfusion?**

Transfusions are generally not required for this kind of surgery, nor is pre-operative blood donation.

#### **What can I do immediately following surgery?**

You may get up and move around as soon as you feel like it, and you may drive short distances when you feel able. Avoid bending, lifting, and twisting for six weeks to allow for healing of the surgical area.

#### **When can I go back to work?**

This depends on the kind of work you do, and how long you have to drive to get there. Surgical patients can return to sedentary (desk) jobs, which require a drive of 15 minutes or less, whenever they feel comfortable – usually two or three weeks. You should not drive long distances (30 minutes or more) for about one month after surgery. Consult with your surgeon for guidance on resuming work, physical labor or activities after surgery.

#### **How likely is it that my pain will be relieved?**

The goal of lumbar surgery is relief of pain and resumption of activities. Some patients may continue to have noticeable back pain in some situations and may require additional treatment.

#### **Will my back be normal after surgery?**

Though you may have excellent relief of pain, a disc is never completely normal after it has herniated. If your problem has been caused by arthritis, the arthritis cannot be cured even if the bone spurs have been removed and the nerves decompressed. You may have more back pain than someone without arthritis or laminectomy surgery, and there is an increased risk of re-herniation of the damaged disc. However, most people can resume almost all of their normal activities after recovering from surgery.

#### **Could I be paralyzed?**

Neurologic injury with spine surgery is possible, but not likely. The possibility of catastrophic injury such as paralysis, impotence or loss of bowel or bladder control is also unlikely, but not impossible. Injury to a nerve root with isolated numbness and/or weakness in the leg is possible.

# Lumbar Spine Guidebook

## **What are the other risks?**

There are general risks with any type of surgery. These include, but are not limited to, the possibility of wound infection, uncontrollable bleeding, collection of blood clots in the wound or in the veins of the leg, abdominal problems, pulmonary embolism (movement of a blood clot to the lung), heart attack or stroke. These events rarely happen, especially to a generally healthy patient. Rarely, death may occur during or after any surgical procedure.

## **What should I do after surgery?**

You should resume low-impact activities as soon as possible, starting with walking. Try to walk a little farther each day, building up to a brisk three-mile walk each day by six weeks after surgery. Once your sutures are removed, you may swim as it is a back-friendly exercise. By two or three weeks after surgery, you may try more vigorous activities such as an exercise bike or elliptical machine. Talk to your surgeon about all your activities, especially aerobics and jogging. Physical activity is good for you, if done properly.

## **What shouldn't I do after surgery?**

In general, you should limit heavy lifting, bending, twisting, and high impact physical activities, including contact sports. Consult your surgeon for details.

## **Could this ever happen to me again?**

Unfortunately, yes. As mentioned above, only part of the disc is removed and there is no way to return the disc to normal which means recurrent herniation does occasionally occur. Also, adjacent discs may be abnormal and could rupture in the future.

## **Should I avoid physical activity?**

No. Exercise is good for you! You should get some sort of low-impact aerobic exercise at least three times a week. Walking outside or on a treadmill, using an exercise bike, and swimming are all examples of exercise that is appropriate for patients following lumbar laminectomy. Consult with your surgeon to determine what exercise plan is best for you.

## **Questions About Lumbar Fusion Surgery**

### **How long will I be in the hospital?**

The hospital stay is generally one to three days.



# Lumbar Spine Guidebook

## **What should I do after surgery?**

As soon as you are able, you should get up and move around. If you are feeling well enough, you may begin driving in two to three weeks with your back brace on. Your surgeon will provide guidance on resumption of work or activities following surgery. Most likely, your surgeon will prescribe a brace for you to wear for part of this time.

## **What shouldn't I do after surgery?**

Generally, you should avoid bending, lifting, and twisting for six to nine months. Even if screws or rods are used, six to 12 months are generally required for the fusion to heal completely. You must protect your spine during this time. If you are a smoker, you definitely should not smoke until your fusion is completely solid. Smoking interferes with bone healing.\*

## **When can I return to work?**

This should be discussed with your surgeon. Generally, patients may return to sedentary jobs whenever they are comfortable, which is usually within three to six weeks. If you drive more than 30 minutes to work, your surgeon may want you to wait longer. It takes much longer to get back to work that requires strenuous physical activity due to the increased stress these activities play on the healing bone.

## **Could this happen to me again?**

Unfortunately, yes. A fusion may add stress to the levels above and below the fusion. If the fusion doesn't heal solidly, even with plates and screws, your symptoms may recur and additional surgery may be needed.

## **Should I avoid physical activity?**

No. Exercise is good for you! You should get some sort of low-impact aerobic exercise at least three times a week. Walking outside or on a treadmill, using an exercise bike and swimming are all examples of exercise that is appropriate for patients who have undergone a lumbar fusion. Your surgeon will provide guidance on resumption of work or activities following surgery.

\*Behrend, C., Prasn, M., Coyne, E., Horodyski, M., Wright, J., Rehtine, G., Smoking Cessation Related to Improved Patient-Reported Pain Scores Following Spinal Care, J Bone Joint Surg Am, 2012 Dec 05; 94 (23): 2161-2166.



## Section Three:

# At Home After Surgery

## Caring for Yourself at Home

Things you need to know for safety, recovery and comfort.

### Be Comfortable

- Take pain medicine at least 30 minutes before physical therapy.
- Wean from prescription medication to non-prescription pain reliever, such as Extra-strength Tylenol® tablets up to four times per day.
- For three months after surgery, do not take over-the-counter anti-inflammatory medication such as Ibuprofen (Motrin®, Advil®) and Aleve®. This type of medication can interfere with bone healing and jeopardize the success of your surgery. If you have prescription anti-inflammatory medication, consult with your doctor before taking it.
- Use ice for pain control. Applying ice to the wound area will decrease discomfort. Do not use ice for more than 20 minutes each hour.
- Your doctor may prescribe a muscle relaxer to help with muscle spasms. Gentle stretching may also ease muscle spasms. Gentle massage to the muscle spasm may help to reduce discomfort.
- Muscle strain and spasm can often be reduced by elevating legs with pillows. Using this positioning technique, along with pain medication will optimize your comfort.
- Apply heat to areas of muscle spasm only. Do not use heat around your incision; this will cause swelling.
- Change position frequently (every 45 minutes – 1 hour) to prevent stiffness.
- Avoid bending, lifting and twisting (B.L.Ts).
- Take slow, controlled, deep breaths. Cough deeply and use your incentive spirometer several times each hour. This helps to expand your lungs and prevent pneumonia or respiratory complications.
- Regular and deep breathing can also help relax your muscles and body. This will help improve function and mobility.
- If you have trouble sleeping at night, try not to nap during the day.

# Lumbar Spine Guidebook

## Body Changes

- Appetite may be poor, but your desire for solid food will return.
- Drink plenty of fluids.
- May have difficulty sleeping.
- Energy level will be low.
- Pain medication that contains narcotics promotes constipation. Use stool softeners or laxatives, if necessary. Do not let constipation continue. If softeners or laxatives do not relieve discomfort, contact your primary care doctor or surgeon.

## Compression Stockings

You may need to wear special stockings to compress veins in your legs. This helps keep swelling down and reduces chance for blood clots.

- Wear stockings continuously, removing one to two hours twice a day.
- Wear stockings for two weeks after surgery; ask your surgeon when you can discontinue.

## Incision Care

- You may shower (not tub bathe) after 48 hours; cover dressing with Aqua-guard. No need to cover if dermabond (medical glue) was used; or if covered with the clear tape (Tegaderm)
- Notify your surgeon if there is increased drainage, redness, pain, odor or heat around the incision.
- If you feel warm or sick, take your temperature. Call your surgeon if temperature exceeds 100.5 degrees.
- Leave dressing in place until you are seen by your surgeon.

## Recognizing and Preventing Potential Complications

### Infection

<b>Signs</b>	<ul style="list-style-type: none"><li>• Increased swelling and redness at incision site.</li><li>• Change in color, amount and odor of drainage.</li><li>• Increased pain around incision.</li><li>• Fever greater than 100.5 degrees.</li></ul>
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<b>Prevention</b>	<ul style="list-style-type: none"><li>• Take sponge baths for first two days.</li><li>• After that, shower as long as wound is covered with Aqua-guard. No need to cover if dermabond (medical glue) was used; or if covered with the clear tape (Tegaderm)</li><li>• AVOID tub bathing for at least three weeks after surgery. Keep wound clean and dry as much as possible to avoid potential infection until it fully heals.</li></ul>
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# Lumbar Spine Guidebook

## Blood Clots

Surgery may cause blood to slow and coagulate in veins of legs (either leg), creating a blood clot. If a clot occurs, you may need to be admitted to the hospital to receive intravenous blood thinners.

### Signs

- Swelling in thigh, calf or ankle that does not go down with elevation.
- Pain or tenderness in calf.

### Prevention

- Perform ankle pumps.
- Walk several times a day.
- Wear compression stockings if indicated.
- Elevate your feet/legs.

## Pulmonary Embolism

An unrecognized blood clot could break away from the vein and travel to the lungs. This is an emergency — **CALL 911**.

### Signs

- Sudden chest pain.
- Difficult and/or rapid breathing.
- Shortness of breath.
- Sweating.
- Confusion.

### Prevention

- Follow guidelines to prevent blood clots.

## Discharge Instructions

Your surgeon will discuss discharge instructions with you. Generally, the following guidelines apply.

### Lumbar Laminectomy

#### Immediate Post-op to Discharge from Hospital

- Get out of bed as soon as you are comfortable.
- Walk as desired.
- Keep the wound clean and dry.

## Discharge Instructions (Cont.)

### Discharge to First Office Visit

- If you were given a back brace, wear it when you are out of bed. Check with your surgeon on duration of brace.
- Continue to walk as desired, gradually increase distance; no other exercise is advisable.
- You may shower 48 hours after surgery. Cover the dressing with Aqua-guard. Plan to rest for the next week at home; gradually increase activity as tolerated. Avoid bending, lifting, and twisting for the next month.
- Call your surgeon if any incision drainage, redness or fever.  
It is not unusual to have some leg pain and/or numbness. Contact your surgeon if symptoms are severe.

### First Visit (Approximately 10 Days Post-operative) to Six Weeks

- Gradually increase activities.
- Remain on your feet for longer periods and increase walking distances.
- Do not drive until cleared by your surgeon.
- Return to sedentary job in three to six weeks, if driving is cleared by your surgeon
- Bathing in the tub and pool exercises may begin as directed by your surgeon.
- No bending, twisting or lifting.
- Limit sitting and use good lumbar support to avoid undue pressure on your spine.
- Sexual intercourse is allowed, if desired (patient on bottom).
- Wear your back brace whenever up.

### Six to 12 Weeks

- Return to light duty or physical labor, if you are pain free.
- Avoid heavy lifting (greater than 10 lbs.) or repetitive bending and twisting of back.
- Start regular low-impact aerobic activities such as vigorous walking, stair climbing machine, or low-impact aerobic classes.
- You will be shown strengthening and therapeutic exercises at six weeks.
- Wear a back brace whenever up.

### 12 to 24 Weeks

- Avoid heavy lifting (greater than 10 lbs.) or repetitive bending and twisting of back.
- Continue wearing your back brace until further advised.
- Refrain from activity that causes repetitive twisting of the spine such as swimming. However, walking in water can be therapeutic during this time.

# Lumbar Spine Guidebook

## Lumbar Fusion

### Immediate Post-op to Discharge from Hospital

- Get out of bed as soon as you are comfortable.
- Keep wound clean and dry.

### Discharge to First Office Visit

- Be up as much as possible; wear back brace when out of bed; walk as desired. Gradually increase distance.
- You may shower after 48 hours; do not tub bathe or swim. Cover dressing with Aquaguard.

### First Visit (Approximately 10 Days to Six Weeks Post-operative)

- Increase your activities. Remain on your feet for longer periods and increase walking distances.
- You may shower, tub bathe and swim per physician orders.
- No bending, lifting or twisting.
- Limit sitting and use good lumbar support to avoid placing pressure on the spine.
- Do not drive until cleared by your surgeon.
- Sexual intercourse is allowed, (patient on bottom).
- Wear your back brace whenever up.
- No running, contact sports or lifting weights over 10 pounds.

### 12 to 24 Weeks

- Avoid lifting (over 10 pounds), repetitive bending, and twisting of back.
- Wear the back brace until your surgeon advises.
- Continue restrictions until your fusion completely heals.
- Refrain from activity that causes repetitive twisting of the spine such as swimming. However, walking in water can be therapeutic during this time.

## Post-operative Goals

### Weeks One to Two

- Continue to walk using a walker as needed. A walker typically reduces stress placed on the spine and can help with balance. As pain and discomfort lessen, increase walking distance and wean yourself from the walker as you feel comfortable or as the physical therapist indicates.
- Walk frequently, slowly increasing your distance by 500-1000 ft. as tolerated.
- Gradually resume daily activities and household tasks.
- Always adhere to spinal precautions (no bending, lifting, twisting) when moving around.
- Do 10-20 minutes of home exercises at least twice a day.
- Progress to doing exercises three times a day.

### Weeks Three to 12

- Walk daily, steadily increasing your distance and endurance. Increasing distance one to three miles as tolerated.
- Wean yourself from the walker as indicated by surgeon or therapist.
- Gradually resume community tasks. Give yourself frequent rest breaks. No ongoing activity for more than 30 minutes without resting.
- Adhere to spinal precautions (no bending, lifting, twisting).
- Do home exercises at least three times a day.

## Post-operative Exercises

A post-operative exercise program is an important component of successful spine surgery. Patients should work with physical therapists to develop a maintenance program specific to their needs and one they enjoy. The ultimate goal is to restore strength, flexibility and mobility through a progressive and safe exercise program. Consult with your surgeon or physical therapist before starting any exercise program. Depending on your specific surgery, you may receive additional exercises either at the hospital or when you start outpatient physical therapy.

- Exercises help to stabilize the spine and improve strength and flexibility in legs; thus optimizing surgical outcome and functional mobility.
- Start with low-impact exercises such as recumbent bike or walking on a treadmill. At three weeks, once the incision heals and surgeon approves, start water aerobics and pool activities. These are good low-impact exercises for your entire body.
- To protect your back, perform exercises on a firm surface, such as floor or firm bed. Maintain good posture when exercising and move slowly. Stop if you have excessive pain or discomfort.
- Listen to your body. If you notice increased discomfort or fatigue, recall what you did earlier that day or the day before. Chances are you overdid things and need to scale back until tolerated. Continue to slowly advance as you tolerate the activity.
- When performing an exercise, keep abdominal muscles tight by "pulling your belly button in toward your spine." Breathe continuously when performing exercises. Count aloud to keep from holding breath.
- Proper posture and alignment will also facilitate an efficient and stabilizing response in the muscles of the trunk, especially when performed in conjunction with exercise.

## Principles of Exercises

### When Standing

1. Keep head level with chin slightly tucked in.
2. Stand tall by looking forward and keeping shoulders over hips.
3. Relax shoulders. Tighten stomach muscles by pulling in stomach. This will relieve undue stress on spine.



# Lumbar Spine Guidebook

## When Sitting

1. Keep head level and chin up.
2. Place buttocks all the way to back of chair. A rolled towel in small of back provides lumbar support. Do not slouch.
3. Keep feet flat on floor to support back. When feet dangle, it pulls at lower back. If feet don't firmly touch the ground, place feet on stool and put a pillow behind your back.
4. Tighten stomach muscles by pulling in stomach. This will relieve undo stress on spine.

## When Lying

1. Use a firm mattress.
2. Lie on side with hips and knees slightly bent and place a pillow between your knees.
3. Lie on your back with pillow under head and one under knees to take strain off lower back. Do not lie on your stomach.

## When Walking

1. Goal is to advance the distance you walk each day.
2. For first few days at home, do multiple short walks throughout the day.
3. Advance your walking distance. Frequency is better than walking distance. This approach is better for reducing stiffness.
4. Keep head up, chest up, shoulders back and relaxed, buttocks and stomach tucked in and use walker as needed. Use a walker for distance ambulation to keep pressure off back, if needed. Wean yourself from the walker unless told otherwise by surgeon or therapist.
5. Wear proper footwear when standing or walking for long periods.

# Lumbar Spine Guidebook

## Exercises

The models in this guidebook are shown not wearing a back brace. Your surgeon will instruct you when you will be required to wear a brace.

### Ankle Pumps

Lying flat, flex and point your feet.  
**Perform 20 ankle pumps, 2x/day.**



### Quad Sets

Lie on your back and press the back of one knee into the mat or bed by tightening muscles on the front of the thigh (quadriceps).

Hold for 10-15 seconds.

**Perform 20 quad sets, 2x/day.**



### Gluteal Sets (Bottom Squeezes)

While sitting, lying or standing, squeeze bottom together. Do not hold breath.

Hold for 10 – 15 seconds.

**Perform 20 gluteal sets, 2x/day.**



### Long Arc Quads (knee extensions)

Sit in a chair with knees bent (place buttocks at back of chair). Slowly extend one leg until knee is straight; hold 10-15 seconds. Return to starting position. Repeat exercise with the other leg.

**Perform 2 sets of 10 knee extensions, 2x/day.**



# Lumbar Spine Guidebook

**Can begin these after 6 weeks**

## **Abdominal Sets (Tummy Tucks)**

Lie on your back with knees bent. Tighten stomach (abdominal) muscles by drawing belly button toward spine. Feel abdominal muscles tighten. Hold for 10- 15 seconds, continuing to breathe comfortably. If you can't breathe comfortably, then you are trying to tighten muscles too much. Hold for 10 – 15 seconds.

**Perform 20 abdominal sets, 2x/day.**



**NOTE:** This exercise is the beginning of a lifelong challenge of being able to keep abdominal muscles strengthened.

## **Hamstring Sets**

Lie flat on back. With one leg bent at knee, dig heel into bed and tighten hamstrings (muscle behind thigh). This is an isometric exercise, so there will be no actual movement of leg. Repeat with other leg. Hold 10 – 15 seconds.

**Perform 20 hamstrings sets, 2x/day.**



## **Supine Stabilization**

Lie comfortably on the floor or bed with both legs bent and arms down by your side. Slowly bend one knee until it is positioned directly over your hip while extending the opposite arm over your head. The goal of the exercise is to maintain a neutral spine position throughout the movement.

**Perform 20 stabilizations, 2x/day.**

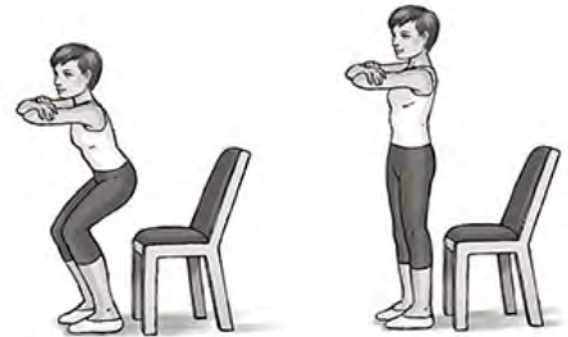


# Lumbar Spine Guidebook

## Sit-to-Stand Exercise

1. Place a chair behind you. Stand up straight with a tight core and flat back. Fold your arms in front. Your feet should be shoulder-width and toes pointing forward.
2. Slowly descend by bending your knees and driving your hips back. Keep your chest and head up.
3. Touch the chair with your gluteal muscles. Then, slowly rise back to the starting position.

**Perform 3 sets of 10 Sit-to-Stand exercises, 2x/day**



## Walking

Walk as far as possible, taking rest breaks as needed. Increase distance each day. Six weeks after your operation, your goal should be to walk at least two to three miles a day.

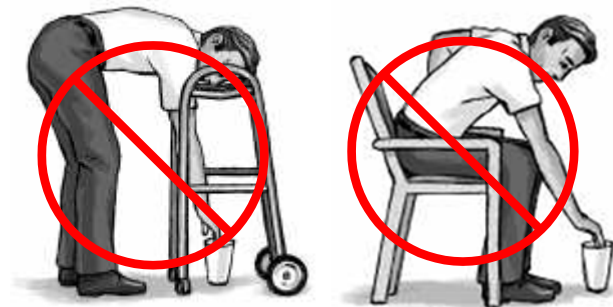
## Activities of Daily Living

### Lumbar Spinal Precautions: No “B.L.T.”

Check with your surgeon or physical therapist for specific precautions. General guidelines include:

#### No Bending

- Keep shoulders in line with hips. Avoid leaning forward while standing up. Avoid reaching down to the floor while you sit down.
- Practice optimal body mechanics by keeping chest up, shoulders back and abdominal muscles tight. This helps maintain neutral spine position and reduces stress on spine.



# Lumbar Spine Guidebook

## No Lifting

- Do not lift more than 10 pounds for two months after surgery.
- To lift an object, keep chest upright, bend at the knees and hips, and hold the object close to your body.



## No Twisting

- Keep shoulders and hips pointing in the same direction.
- To look behind or to either side, turn your entire body. Do not just turn your head and shoulders.



## Back Brace (Where Applicable)

Several types of back braces help provide support and/or limit motion to your back.

One of the more popular braces used after a spinal fusion is the **California brace®** or **lumbosacral brace**. This soft brace has Velcro® closures and it is worn down over your hips. The brace is adjusted on the sides and centered low over abdomen. Make sure the two Velcro panels fasten on either side, not in front.

To tighten, pull the "rip cord". It is best to do the last part standing to ensure a snug fit.

To remove the brace, unfasten the "rip cord" and secure it to one side of brace. Next, undo Velcro closure on other side of brace and remove.

There is no recoil mechanism so strings must be "reset" by pulling either end of brace lightly until cords are fully extended.

Another type of back brace is the **thoraco lumbar sacral orthosis (TLSO)**. This brace is commonly referred to as a body jacket or "clam shell" brace. Patients having thoracic or high lumbar surgery may need to wear this type of brace.

It is often recommended patients wear a back brace during post-operative period so that motion is limited at the surgical site. Wearing a back brace whenever out of bed may aid in optimal healing. Some patients may need to wear their brace for as little as four weeks or as long as three months. Your surgeon will advise you.



# Lumbar Spine Guidebook

## Bed Positioning

### Lying on Your Back

- Place a pillow under knees or thighs, under neck and under arms. This positioning reduces stress on the spine.
- When you change positions, tighten abdominal muscles and log roll keeping hips, shoulders and ears lined up.



### Lying on Your Side

- With knees slightly bent up toward chest, place a pillow between knees and one under neck. This provides optimal spine alignment.
- Tighten abdominal muscles and log roll when changing positions.
- Adding a pillow under your arm will increase comfort and further reduce stress on spine.



### Lying on Your Stomach

Avoid this position. It places too much strain on lower back. If you cannot avoid this position, place a pillow under your stomach to provide back support.

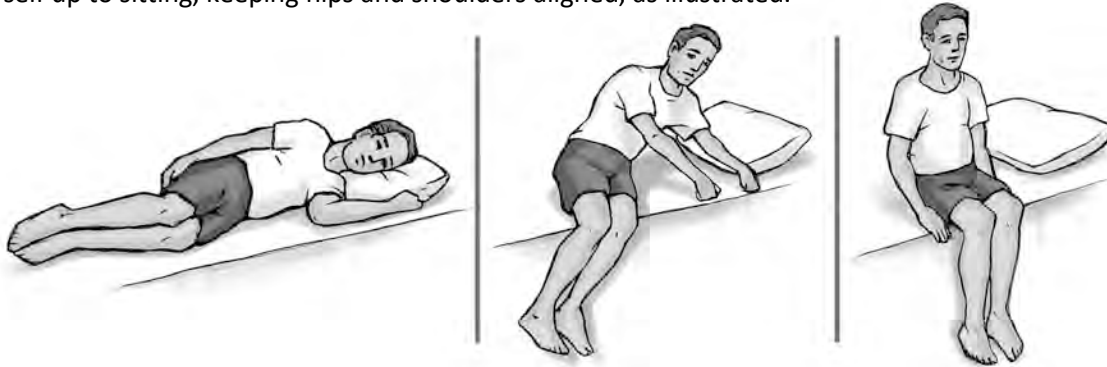
### Note

Do not sleep on a soft bed or couch. Doing so takes the three spinal curves out of alignment and adds extra stress to the back.

## Bed Mobility

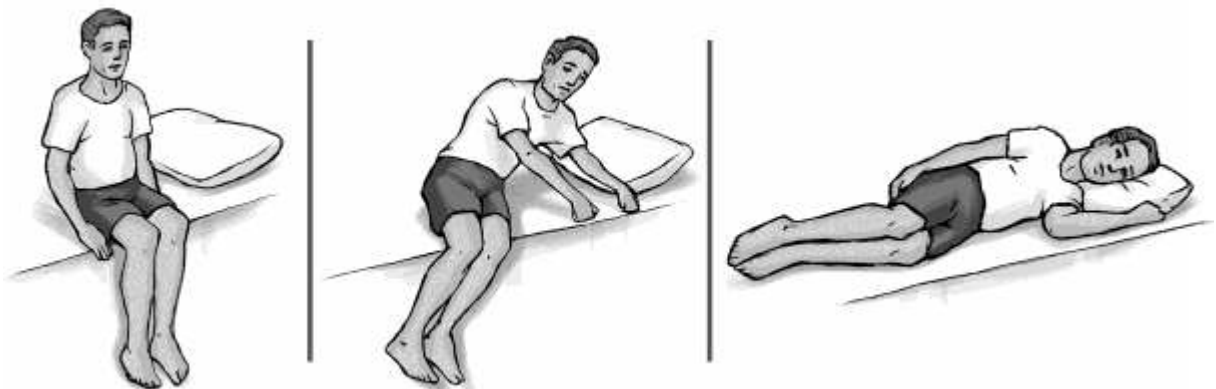
### Getting Out of Bed

To move in and out of bed, "log roll" to prevent bending or twisting of spine. Start by bending knees while lying on back. Now roll onto your side keeping hips, shoulders and ears moving together to avoid twisting (i.e. roll like a log). As you move your legs off of the bed, simultaneously push yourself up to sitting, keeping hips and shoulders aligned, as illustrated.



### Returning to Bed

Reverse the above technique for returning to bed. Back up to the bed until you feel bed at back of legs. Reach for the bed with hands as you lower to sitting position on bed. Scoot hips back on bed. The further back you scoot the easier it will be to lie down on your side. As you lean down on an arm, bring feet up onto the bed until you are lying down on side. Then, roll onto back keeping shoulders, hips and ears in alignment.

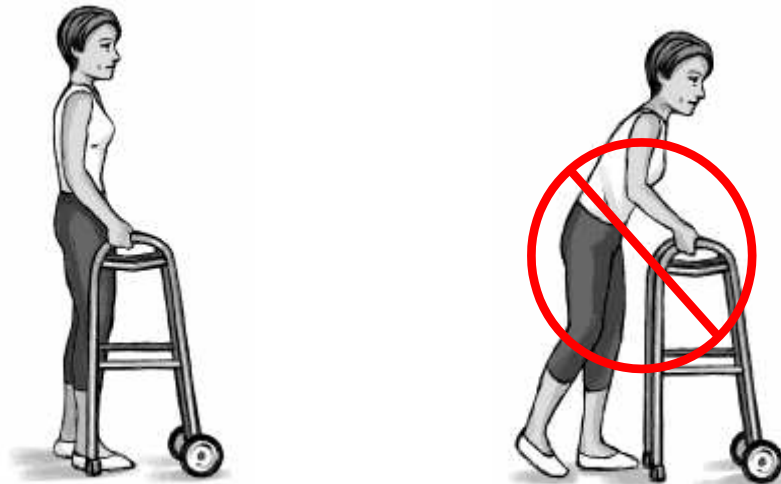


# Lumbar Spine Guidebook

## Using a Walker

When using a walker, it is important to remember key rules.

- Push up from the surface you are sitting on (e.g., bed or chair). Avoid pulling on walker to stand. It could easily tip backward and will not offer optimal support to stand.
- It is easier to stand up from a chair with armrests and from a bedside commode with armrests. Armrests give better leverage and control to stand and sit safely.
- A walker takes pressure off your back. Push down through the walker with arms as needed without raising shoulders or leaning too far forward.
- Keep your feet near the back of the walker frame or rear legs. Don't stand too close or too far from walker. Stay inside walker.
- Stand up straight when walking. Keep shoulders back, head up, chest up and stomach muscles tight.
- If your walker has wheels, there is no need to lift it; just push the walker forward as you walk.
- Each day, increase walking frequency and distance. Frequent walks are very important to decrease stiffness and pain. Six weeks after surgery, your goal is to walk three miles unless otherwise instructed by doctor or therapist.
- Taking smaller steps and walking slower does not necessarily make it easier to walk. You may end up expending more energy than necessary. Move at your own pace and comfort level.
- Take six to eight walks per day at home. During at least one of the walks, increase the distance as tolerated.
- Your surgeon or physical therapist can teach you how to adjust the walker to the appropriate height.





# Lumbar Spine Guidebook

## Transfers

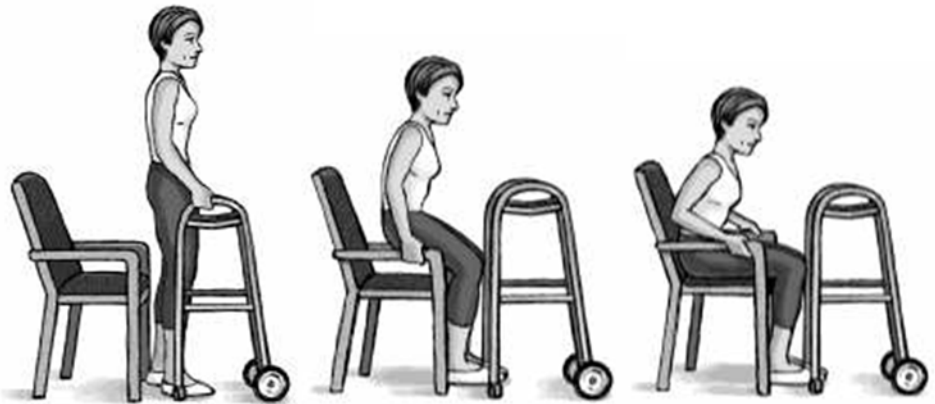
### Getting Into a Chair

Back up to chair until it touches the back of your legs. With hands, reach behind to grasp armrests of chair. Using arms and legs, squat and lower self into chair.

Special Instructions:

- Tighten stomach muscles to provide support for lower spine.
- After sitting, your feet should firmly rest on the floor or a foot stool. Do not let feet dangle, as this places additional stress on the spine. While sitting, protect your back using a pillow or rolled towel as a lumbar roll.

**If using a towel, ensure the towel roll is not too large, as this may place additional stress on the spine. Pillows and towel rolls should take up the empty space between your spine and the seating surface.**



### Getting Out of a Chair

Scoot forward until you are sitting near edge of chair. With hands on armrests, push yourself up into standing position. Straighten legs and shift weight forward over feet. Bring hands to walker as you are moving into standing position.

Helpful Tips with Sitting:

- Do not let feet dangle when sitting. Have feet firmly supported to prevent pulling at back.
- 

### From Bed

It is important to initiate standing by pushing on the bed with arms and NOT by pulling on the walker. Place hands on bed and push up to stand. Focus on straightening legs and shifting weight forward over feet. As you start to straighten, bring one hand forward to the walker and then other hand. When sitting back down, be sure to reach for bed one hand at a time to control body.



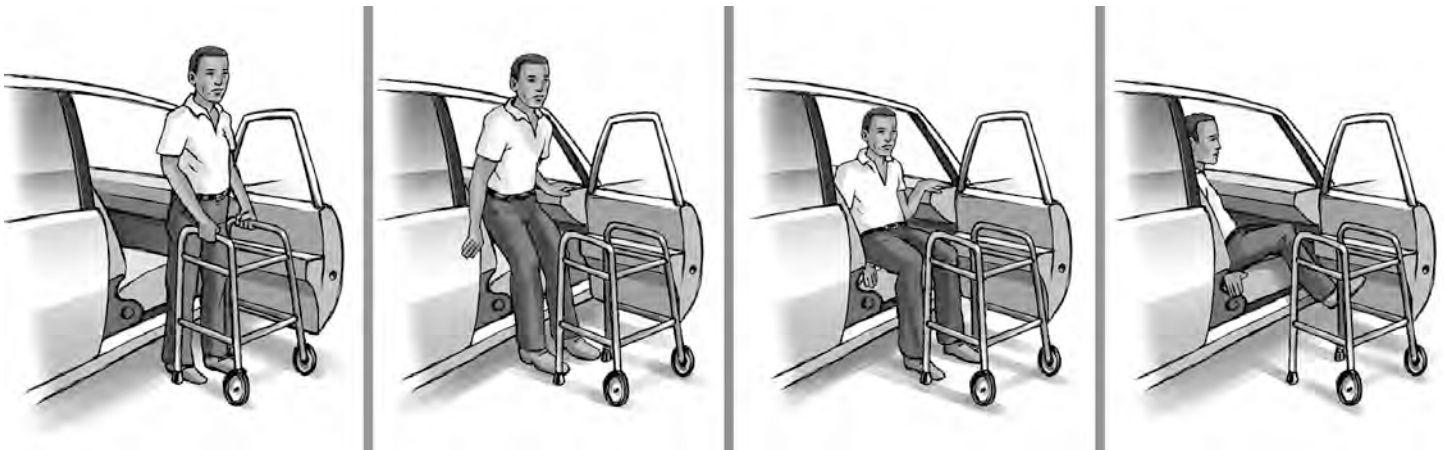
# Lumbar Spine Guidebook

## Getting Into the Car

Back up to the car seat until you feel it at the back of legs. Reach your right hand behind for the back of seat and your left hand to a secure spot either on frame or dashboard. (The door and walker are not secure options. If you must use them, have someone hold the unsteady objects.) Lower slowly until sitting. Scoot hips back until you are securely on the seat.

Leading with your hips, bring one foot at a time into car until you are facing forward. Prevent twisting by keeping shoulders, hips and ears pointing in same direction. You may want to recline the seat to increase ease of lifting legs. Keep the seat slightly reclined while riding to support your back from bumps in the road.

## Getting Out of the Car



Bring your legs out one at a time. Lead with your hips and shoulders and do not twist your back. Place your right hand on back of the seat and the left hand on the frame or dashboard. Push up to stand. Reach for the walker when you are stable.

Helpful tips with car transfers:

- An empty plastic bag on the seat will help you slide in/out.
- Position your seat all the way back so you have maximum leg clearance.
- If you must have one hand on the walker for leverage, have someone hold it down on front bar for stability.

Your surgeon will determine when you can return to driving. You need to have full neurologic function and minimal pain or discomfort before driving. You also need to discontinue taking medications that may affect your driving skills and safety.



# Lumbar Spine Guidebook

## Getting Onto the Commode

Back up to commode like you would a chair. Without twisting to look, reach back with both hands for the handles of the commode or toilet seat and squat using your arms to help slowly lower to a sitting position. While sitting, your feet should be flat on the floor for support.



## Getting Off of the Commode

Holding on to toilet seat handles, use your arms to lift your body and scoot hips forward to edge of commode seat. With knees bent and feet underneath you, push up through your legs into standing position. As you stand, maintain support by reaching for your walker one hand at a time.



## Bathing

Stepping in/out of tub:

- If your shower is part of a tub, hold onto the front wall of the shower and step in or out sideways. Do not step in or out facing forward. This side-step places less stress and motion on lower spine.
- If you have a walk-in shower stall, step in as usual making sure not to twist as you turn shower handles.
- You may want to have a bath or shower seat for the first few days you shower. You can borrow, rent or buy it inexpensively. A small patio resin/plastic chair also works. Small tub/shower benches can be purchased at most drug stores or medical supply stores.
- Your surgeon will provide clearance on taking a tub bath or swimming. Generally, you may not bathe in a tub or swim for at least three weeks after surgery.



# Lumbar Spine Guidebook

## Using Stairs

### Negotiating Consecutive Steps

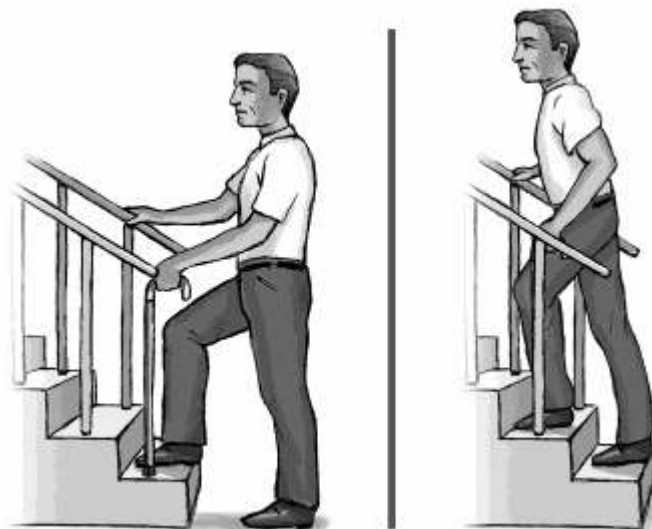
- Use the handrail and/or a cane for assistance.
- If one leg feels weaker than the other, go up the steps with your stronger leg first. Go down steps with your weaker leg first. Remember, "up with the good and down with the bad."
- If unsteady, take one step at a time. Concentrate on what you are doing. Do not hurry.
- Have someone assist or spot you if necessary or indicated by therapist. The person should stand behind and slightly to the side when going up the steps. When going down steps, the person should be in front.

### Helpful Stair Tips

- Keep steps clear of objects or loose items.
- Plan ahead. Following surgery, keep items in areas where you can limit stair use.
- Install one or two handrails. Two handrails increases ease and safety.

### Negotiating Curb or One Single Platform Step

- If possible, use a rolling walker.
- Stand close to the step.
- Place entire walker over the curb onto sidewalk. Make sure all four prongs/wheels are on the curb.
- Pushing down through the walker toward the ground, step up with your stronger leg first, then follow with other leg.
- Reverse the process for going down a curb. Place the walker below the curb, then step down leading with your weak leg first.



# Lumbar Spine Guidebook

## Personal Care

### Using a Reacher

Using a reacher limits the amount of bending required to dress. Sit in a chair with your back supported. Use the reacher to hold the front of undergarments or pants and pull the garment over one foot at a time, then up to your thighs. Stand up, squat to reach clothing and pull up both garments at same time. Reverse process to remove your clothing.



### Using a Reacher to Pick Up Items

A reacher also helps you pick up items that fall while you are under "no bending" restrictions.



### Using a Sock Aid

A sock aid helps you reach your feet without bending. Sit supported in a chair and hold the sock aid between your knees. Slide a sock onto the plastic cuff making sure to pull toes of sock all the way onto the sock aid. Hold ropes and drop the sock aid down to foot. Place foot into cuff and pull up on the ropes as you point toes down until sock is on foot. Let go of one rope and pull cuff back onto your lap to put on the other sock.



## Removing a Sock with the Reacher

Use the black hook on the reacher to push sock over back of heel. Continue pushing sock completely off or use the jaw of reacher to pull sock completely off.



## Body Mechanics

### When approved by MD to resume normal activity

This section provides general tips on how to practice and adapt safe body mechanics to everyday work activities. There may be more than one way to correctly perform a task. It depends on your abilities. You may need to alter your ways of moving based on your strength, flexibility, pain level, and/or other medical conditions. Check with surgeon or physical therapist for details.

#### Standing

- Do not lock knees. A bent knee takes stress off lower back.
- Wear shoes that support feet to help align the spine.
- If you stand for long periods, raise one foot slightly on a step or inside frame of a cabinet. Resting a foot on a low shelf or stool helps reduce pressure and constant force placed on the spine. Shift feet often.
- While standing, keep shoulders back so they do not roll forward.
- Keep back as upright as possible; keep head and shoulders aligned with hips.



#### Bending

- Bend at your knees and hips instead of at your waist/back. Keep chest and shoulders upright, centered over hips. This maintains the three natural spinal curves and keeps stress off your back.
- Hold objects close to your body to limit strain on back.
- Do not bend over with your legs straight. This puts great pressure on lower back and can cause serious injury.

#### Turning

- Think of your upper body as one straight unit, from shoulders to buttocks.
- Turn with your feet, not your back or knees. Point your feet in direction you want to go. Step around and turn. Maintain the spine's three curves.
- Do not keep your feet and hips fixed in one position, and do not twist from back. The joints in your back are not designed for twisting and this kind of motion increases the risk of injuring discs and joints.

# Lumbar Spine Guidebook

## At 6 Weeks or Once Cleared by the Surgeon

### Lifting

- Lift your body and the load at the same time, allowing your legs to do most of the lifting.
- Squat to pick up heavy objects and let your leg muscles do the work. Hold heavy objects close to your body to keep the back aligned. Lift objects only to chest height.
- Do not bend over at the waist to lift anything and do not twist while lifting. Avoid trying to lift above shoulder level.

### Kneeling Lift

- With awkward objects, kneel and move object onto one knee.
- Bring it close to body and stand up.

### Lifting Object from Floor

- Stand with item between your feet, grasping both handles while squatting. Keeping your back straight, extend knees, and lift the item.
- Return to original position in same manner.

### Reaching

- Store commonly used items between shoulder and hip level.
- Get close to the item. Use a stool or special reaching tool, if you need to.
- Tighten your abdominal muscles to support your back. Use the muscles in arms and legs (not back) to lift the item.
- When retrieving objects that are low, but not low enough to kneel or squat, brace yourself by placing your hand on a fixed object such as a counter.

### Twisting

- Avoid twisting your trunk or core to reach things.
- Step in the direction of the object you are trying to reach.

### Pushing vs. Pulling

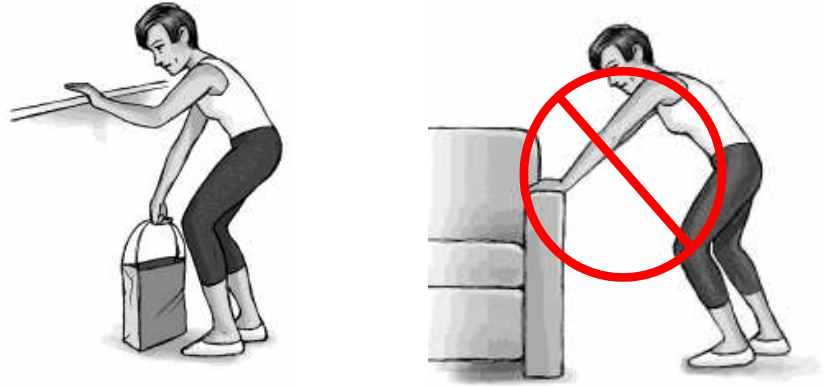
- Push, rather than pull, large or heavy objects.
- Make sure to lower your hips and keep your back stabilized by tightening your muscles.



# Lumbar Spine Guidebook

## Moving Objects

- Keep your elbows close to your side and use your total body weight and legs to push. Do not pull.



## Around the House

After cleared by surgeon to resume normal activity or precautions are limited

### Household Chores

#### Making Bed

- Do not bend over too far when making the bed.
- Try to move the sheet to corners and kneel or squat to pull them around mattress.

#### Dusting

- Use dusting devices that reach distances so you don't have to reach far or lean backward.

#### Cleaning

- To clean overhead or tall objects, use a step stool so you don't overreach.

#### Wiping Lower Surfaces

- When wiping or dusting low objects, do not bend lower back.
- Try to kneel or squat next to object.

#### Vacuuming

- Use your legs, not your back, when vacuuming.
- Do not vacuum by reaching too far away from body.
- Try to work for small periods with frequent breaks.
- Keep the vacuum close to your body.
- Use a lightweight vacuum.



# Lumbar Spine Guidebook

## Sweeping/Mopping

- Use the full length of the broom to sweep.
- Do not hold the broom handle close to floor.
- Try to keep your spine as straight as possible.
- Sweep with motion coming from your hips instead of shoulders.
- Do not get down on knees to scrub floors; instead use a mop.

## Laundry - Loading Washer

- Place the laundry basket so bending and twisting is avoided.
- Place the basket on top of washer or dryer instead of bending down.

## Household Chores

### Laundry - Unloading Washer

- To unload small items at bottom of washer, lift up one leg when reaching down into washer.
- Do not bend at waist to reach into the washer when loading/unloading.

### Laundry - Unloading Dryer

- Do not bend the lower back when removing laundry from the dryer.
- Set the basket on the floor and squat/kneel next to basket when unloading dryer or front- load washer.
- Try the "golfer's bend" to unload washer/dryer: Support yourself with one hand on the unit and hold the opposite leg straight out as you bend forward. This allows you to keep your back straight and takes pressure off the back.

### Lifting Laundry

- Pick up laundry basket by squatting near it. Do not bend over to lift.

### Ironing

- While ironing, keep the ironing board at waist level to avoid leaning forward.

# Lumbar Spine Guidebook

## Kitchen

- Plan ahead! Gather all cooking supplies at one time. Sit to prepare meals.
- Place frequently-used cooking supplies and utensils within reach to avoid bending or stretching.
- To provide better working height, use a high stool or put cushions on chair when preparing meals.
- Bend at your knees and hips to get things out of lower portion of refrigerator. It is better to squat or kneel instead of bending.
- To get objects out of dishwasher, squat or kneel by door.
- Try sitting on swiveling office chair to unload dishwasher. Place items up onto counter by pivoting around with feet. Then stand and put items into the cupboard.

## Bathroom

- Do NOT get on knees to scrub the bathtub. Use a mop or other long-handled brushes.
- ALWAYS use non-slip adhesive or rubber mats in the tub or "aqua/water shoes."
- Attach soap-on-a-rope so it is within easy reach.
- Keep one foot propped on the bottom lip of sink cabinet to reduce stress on the back.
- When reaching under sink, try to move lower by squatting and brace yourself with a fixed object.

## Outdoors

### Mowing

- When pushing or pulling a mower, do not bend forward.
- Keep your back straight. Bend at the knees and hips. Push or pull with your legs.

### Raking

- When raking, keep your back straight by bending at hip.
- Rake close to the body using your arms and shifting legs to perform rake motion.
- Take frequent breaks.

### Shoveling

- Grab the shovel close to end.
- Shovel by leaning forward and shifting weight.
- Use your legs, not your back.

# Lumbar Spine Guidebook

## Digging

- When digging, place the blade end into the soil with the handle straight up and down.
- Step on top of blade then step off and angle the shovel upward.

## Planting

- When weeding or planting, do not bend over from standing position.
- Kneel or squat in area you are working. It is recommended you maintain squat position for only short periods since this places stress on knees.
- You can also sit on chair or stool to reduce stress on knees instead of kneeling.

## Other Tips...

### Personal

#### Showering

- When washing your hair, try not to let your head bend forward or backward. Squat down with your knees or use a tub bench and/or hand-held shower spout so your neck remains straight.

#### Brushing Teeth

- Stand upright with one foot on the bottom ledge of the cabinet under sink. To avoid bending forward, spit into a sink and use a cup for rinsing your mouth. Support your back by leaning with one arm on the sink/counter as you spit into the sink. Bend at the knees, not the back.

#### Carrying Luggage

- Carry bags on both sides of body instead of one. Try to keep the weight equal.

### Children

#### Lift from Floor

- Do not bend over at back to pick up child. Instead, squat down, bring child close to chest and lift with legs.

#### In/Out of Car

- When placing infant or child in car seat, always support yourself. Place knee on seat of car to unload the stress placed on back.
- Never bend over at waist.



# Lumbar Spine Guidebook

## Children

### Holding Child

- To maintain good posture and decrease stress on back, hold baby/child to center of body, not propped on hip. Hold baby by cradling in arms.
- Keep baby close to body.
- Hold baby by cradling in both arms.



## Work

### Sitting

- Sit in chairs that support your spine. Keep your ears in line with your hips. If needed, support your lumbar curve with a rolled-up towel or lumbar roll.
- Your knees should be level with your hips or slightly lower. Feet should be flat on floor to support spine. If needed, place feet up on footrest.
- Do not slouch. This puts your spine out of alignment and adds extra stress to lumbar curve. Don't sit too far away from the steering wheel when driving.
- Keep your shoulders back and head centered over hips.
- Do not let shoulders roll forward.



# Lumbar Spine Guidebook

## Work

### Computer Ergonomics

- Keep computer screen at eye level.
- Have lumbar support for chair.
- Armrests should be placed at a level that supports forearms and keeps them at waist level. Forearms should not push up into shoulders.
- Adjust height of chair so keyboard is level with forearms.
- Maintain good upright sitting posture.
- Take frequent standing/rest breaks while working (every 20-30 minutes).



### Lower Shelf

- When placing an object on low shelf, always bend down on one knee.
- Use other leg to support.
- Never bend over from waist to place item on shelf.



# Lumbar Spine Guidebook

## Work

### Overhead Cabinets

- Do not overreach to high positions.
- Step up on stool so overhead objects are lower.



## Safety Tips and Avoiding Falls

- Pick up throw rugs and tack down loose carpeting. Cover slippery surfaces with carpets that are firmly anchored to floor or have non-skid backs.
- Be aware of floor hazards such as pets, small objects or uneven surfaces.
- Provide good lighting throughout. Install nightlights in 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. Makes it easier to get up.
- Rise slowly from either sitting or lying position to avoid getting light-headed.
- Do not lift heavy objects for first three months and then only with surgeon's permission.
- Stop and think and always use good judgment.

## Do's and Don'ts for Rest of Your Life

Even after you have reached all recommended goals, all patients who have undergone a spine surgery need to participate in a regular exercise program to maintain fitness and strength of muscles around the spine. With both your surgeon and primary care doctor's permission, you should be on a regular exercise program three to four times per week lasting 20-30 minutes each session. The aim of spine surgery is to return the patient to a full activity level, but conditions leading to spine surgery cannot be completely corrected by even the most successful operation, so certain precautions should be taken.

### What to Do in General

- Avoid bending, lifting and twisting as much as possible. It may be possible to return to strenuous physical activity, including heavy lifting, but discuss this with your surgeon.
- Maintain ideal body weight.
- DO NOT SMOKE!
- Maintain proper posture.
- When traveling, change positions every one to two hours to keep your neck and back from tightening up.

### Exercise – Do

- Choose low impact activity, such as walking, biking, golf, gardening, dancing, swimming, etc.
- Follow the exercises outlined in this Guidebook.
- Take regular one- to three-mile walks.
- Use a treadmill and/or stationary bike at home or at a local fitness center.
- Consult your surgeon or physical therapist about specific sport activities.



### Exercise – Don't

- Do not run or participate in high-impact activities or activities that require a lot of starts, stops, turns and twisting motions.
- Do not participate in high-risk activities, such as contact sports.
- Do not take up new sports requiring strength and agility until you discuss it with surgeon or physical therapist.

**Thank you for choosing the Spine Health Center at Orange Coast Medical Center.**

**It's a pleasure caring for you.**

## Section Four:

# Appendix

## Glossary

- **Annulus** – Outer rings of rigid fibrous tissue surrounding nucleus in the disc.
- **Anterior** – Relative term indicating front of body.
- **Bone Spur** – Abnormal growth of bone, usually present in degenerative arthritis or degenerative disk disease.
- **Cartilage** – Smooth material that covers bone ends of a joint to cushion bone and allow joint to move easily without pain.
- **Computed Tomography Scan (also called a CT or CAT scan)** – Diagnostic imaging procedure that uses combination of x-rays and computer technology to produce cross-sectional images, both horizontally and vertically, of the body. CT scan shows detailed images of any part of body, including bones, muscles, fat and organs. CT scans are more detailed than general x-rays.
- **Congenital** – Present at birth.
- **Contusion** – A bruise.
- **Cervical Spine** – Part of spine that is made up of seven vertebrae and forms flexible part of spinal column. Cervical spine is often referred to as the neck.
- **Corticosteroids** – Potent anti-inflammatory hormones that are made naturally in the body or synthetically for use as drugs; most commonly prescribed drug of this type is prednisone.
- **Degenerative Arthritis** – Inflammatory process that causes gradual impairment and loss of use of a joint.
- **Degenerative Disc Disease** – Loss of water from discs that reduces elasticity and causes flattening of disks.
- **Disc** – Complex of fibrous and gelatinous connective tissues that separate vertebrae in spine. Discs act as shock absorbers to limit trauma to bony vertebrae.
- **Discectomy** – Complete or partial removal of ruptured disc.
- **Dura** – Outer covering of spinal cord.
- **Dural Tear** – Laceration or tear of dura that can occur during surgery. Leakage of spinal fluid occurs at this site. Often treated with bed rest for 24-48 hours thus allowing tear to heal.
- **Facet** – Small plane of bone located on vertebra.
- **Foramina** – Plural form of foramen (a natural opening or passage through a bone).



# Lumbar Spine Guidebook

- **Foraminotomy** – Surgical procedure that removes part or all of foramen. Performed for relief of nerve root compression.
- **Fracture** – Break in a bone.
- **Fusion** – Surgical procedure that joins or “fuses” two or more vertebrae together to reduce movement at this joint space. As a result, pain is lessened.
- **Herniated Disc** – Abnormal protrusion of soft disc material that may impinge on nerve roots. Also referred to as a ruptured or protruding disc.
- **Inflammation** – Normal reaction to injury/disease which results in swelling, pain and stiffness.
- **Joint** – Where the ends of two or more bones meet.
- **Lamina** – Bone that lies posterior to the vertebrae.
- **Laminotomy** – Removal of a small portion of lamina.
- **Laminectomy** – Removal of entire lamina.
- **Ligaments** – Flexible band of fibrous tissue that binds joints together and connects various bones.
- **Lumbar Spine** – Portion of spine lying below thoracic spine and above the pelvis. This part of the spine is made up of five vertebrae. Also called the lower back.
- **Magnetic Resonance Imaging (MRI)** – Diagnostic procedure that uses combination of large magnets, radiofrequencies and a computer to produce detailed images of organs and structures within the body.
- **Myelopathy** – Condition characterized by functional disturbances due to any process affecting the spinal cord.
- **NSAID** – Abbreviation for nonsteroidal anti-inflammatory drugs, which do not contain corticosteroids and are used to reduce pain and inflammation; aspirin and ibuprofen are two types of NSAIDs.
- **Nerve Root** – Portion of spinal nerve that lies closest to its origin from the spinal cord.
- **Neuropathy** – Functional disturbance of peripheral nerve.
- **Nucleus Pulposus or Nucleus** – Relatively soft center of disc that is protected by rigid fibrous outer rings.
- **Osteoporosis** – Condition that develops when bone is no longer replaced as quickly as it is removed.
- **Osteophyte** – Bony outgrowth.
- **Pain** – Unpleasant sensory or emotional experience primarily associated with tissue damage.
- **Pain Threshold** – Least experience of pain that a person can recognize.
- **Pain Tolerance Level** – Greatest level of pain that a person is prepared to tolerate.
- **Paresthesia** – Abnormal touch sensation, such as burning or tingling.
- **Posterior** – Relative term indicating that an object is to the rear of or behind the body.
- **Radiculopathy** – Condition involving the nerve root that can be described as numbness, tingling, or pain that travels along the course of a nerve.

# Lumbar Spine Guidebook

- **Sacral Spine** – Last section of spinal column located below the lumbar spine. It is made up of several semi-fused pieces of bone.
- **Sciatica (also called lumbar radiculopathy)** – Pain that originates along the sciatic nerve.
- **Scoliosis** – Lateral, or sideways, curvature and rotation of the back bones (vertebrae), giving the appearance that the person is leaning to one side.
- **Soft Tissues** – Ligaments, tendons and muscles in the musculoskeletal system.
- **Spinal Stenosis** – Narrowing of vertebral canal, nerve root canals, or intervertebral foramina of the spine caused by encroachment of bone upon the space. Symptoms are caused by compression of the nerves and include pain, numbness, and/or tingling.
- **Spine (also called spinal column or backbone)** - Series of stacked bones (vertebrae), discs and ligaments extending from the base of the skull to the small of the back that surround and protect the spinal cord and provide support to the upper body, chest, stomach and back. The cervical, thoracic and lumbar regions of the spine are composed of 24 articulating/flexible vertebrae.
- **Spinous Process** – Part of the vertebrae that you can feel through your skin.
- **Spondylosis (spinal osteoarthritis)** – Degenerative disorder that may cause loss of normal spinal structure and function. Although aging is the primary cause, location and rate of degeneration is individual. Degenerative process of spondylosis may impact the entire spine creating over growth of bone and affecting intervertebral discs and facet joints.
- **Spondylolisthesis** – Forward displacement of one vertebra over another.
- **Sprain** – Partial or complete tear of a ligament.
- **Strain** – Partial or complete tear of a muscle or tendon.
- **Stress Fracture** – Bone injury caused by overuse.
- **Tendon** – Tough cords of tissue that connect muscles to bones.
- **Thoracic Spine** – Portion of spine lying below the cervical spine and above the lumbar spine. This part of the spine is made up of 12 vertebrae.
- **Torticollis (or wryneck)** – Twisting of neck that causes head to rotate and tilt on an angle.
- **Transverse Process** – Wing of bone on either side of each vertebra.
- **Trigger Point** – Hypersensitive area of muscle or connective tissue, usually associated with myofascial pain syndromes.
- **Ultrasound** – Diagnostic technique which uses high-frequency sound waves to create an image of internal organs.
- **Vertebra(e)** – Bone or bones that form the spine.
- **X-rays** – Diagnostic test which uses invisible electromagnetic energy beams to produce images of internal tissues, bones, and organs onto film.

# Lumbar Spine Guidebook

## Directions and Map



### Directions

#### From the 405 S (to San Diego):

1. Take exit 14 for Brookhurst St toward Fountain Valley.
2. Keep right at the fork, follow signs for Brookhurst St S and merge onto Brookhurst St.
3. Continue on Brookhurst St.
4. Turn right at 18111 Brookhurst St. for parking structure access, or for complimentary valet parking.

#### From the 405 N (to Los Angeles):

1. Take exit 14 for Brookhurst St toward Fountain Valley.
2. Keep right at the fork, follow signs for Brookhurst St S and merge onto Brookhurst St.
3. Continue on Brookhurst St.
4. Turn right at 18111 Brookhurst St. for parking structure access, or for complimentary valet parking.