

# SENTARA SPINE CENTER

## PATIENT AND FAMILY GUIDEBOOK



[SentaraSpineCenter.com](http://SentaraSpineCenter.com)

# TABLE OF CONTENTS

|    |   |
|----|---|
| 2  | <a href="#"><u>General Information</u></a>                                  |
| 4  | <a href="#"><u>Sentara Spine Center Team</u></a>                            |
| 7  | <a href="#"><u>Prepare Your Home for Your Return</u></a>                    |
| 9  | <a href="#"><u>General Diet Consideration</u></a>                           |
| 10 | <a href="#"><u>Preparing for Your Discharge</u></a>                         |
| 14 | <a href="#"><u>Cervical Surgery Preoperative Exercises</u></a>              |
| 16 | <a href="#"><u>Lumbar Surgery Preoperative Exercises</u></a>                |
| 18 | <a href="#"><u>Your Medication List</u></a>                                 |
| 20 | <a href="#"><u>Understanding Your Surgery and Anesthesia</u></a>            |
| 21 | <a href="#"><u>Preparing for Your Surgery</u></a>                           |
| 24 | <a href="#"><u>Day of Surgery</u></a>                                       |
| 30 | <a href="#"><u>After Surgery</u></a>  |
| 32 | <a href="#"><u>Top 10 Reasons to Heal at Home</u></a>                       |
| 35 | <a href="#"><u>Caring for Yourself at Home</u></a>                          |
| 36 | <a href="#"><u>When You Are at Home After Surgery</u></a>                   |
| 40 | <a href="#"><u>After Your Spine Surgery</u></a>                             |
| 41 | <a href="#"><u>Cervical Surgery Precautions</u></a>                         |
| 42 | <a href="#"><u>Lumbar Surgery Precautions</u></a>                           |
| 43 | <a href="#"><u>Cervical Surgery Neck Braces</u></a>                         |
| 45 | <a href="#"><u>Activities of Daily Living for all Spine Patients</u></a>    |
| 58 | <a href="#"><u>Cervical Surgery Postoperative Exercises — Weeks 1-2</u></a> |
| 61 | <a href="#"><u>Cervical Surgery Postoperative Exercises — Weeks 3-6</u></a> |
| 64 | <a href="#"><u>Lumbar Surgery Postoperative Exercises — Weeks 1-2</u></a>   |
| 67 | <a href="#"><u>Lumbar Surgery Postoperative Exercises — Weeks 3-6</u></a>   |
| 68 | <a href="#"><u>For the Rest of Your Life</u></a>                            |
| 69 | <a href="#"><u>Understanding the Spine and Types of Surgery</u></a>         |
| 72 | <a href="#"><u>Glossary for Spine Surgery</u></a>                           |
| 73 | <a href="#"><u>Index</u></a>  |
| 74 | <a href="#"><u>Notes</u></a>  |

# GENERAL INFORMATION



## Welcome

Thank you for choosing the Sentara Spine Center. Spine surgery can be done either to relieve pain, slow progression of symptoms, return function or restore independence. Clinically proven protocols, individualized care, experienced surgeons and the guidance of a Spine Patient Navigator are ready to help you return to your favorite activities.

Use this educational book as your guide to a better surgical experience. Keep it with you during your surgical journey:

- Provider visits
- Preoperative education
- Pre-admission screenings
- Hospital for surgery

You will find valuable health information, helpful hints and places to write notes. It is a great way to keep all of your information in one place.

There are more than one million spinal procedures performed each year in the United States. Our goal is to keep you safe and provide the most successful spine surgery as possible. We look forward to helping you return to a healthier and more active lifestyle. Please let us know how we can improve any aspect of your care. Let's get started!

### **Sentara Spine Center Features**

- Nurses and therapists who are specially trained in the care of spine surgery patients
- Emphasis on individualized care
- Motivational care team
- Family and friends as “Coaches”
- Spine Patient Navigator who helps facilitate your care throughout the process
- Preoperative education and this comprehensive patient guidebook

We know from experience that patients who participate in their care have better outcomes. The Sentara Spine Center will involve you in each step of your journey toward a higher quality of living.

### **Using the Guidebook**

Understanding what will happen before and after spine surgery prepares patients to participate in their care and helps to decrease anxiety. The Sentara Spine Center Patient and Family Guidebook includes:

- What to expect before and after surgery
- How to prepare for surgery

This guidebook is a reference for you to gain a basic understanding of spine surgery. Your Sentara Spine Center team may add or revise any of the guidebook recommendations based on your unique needs.

# SENTARA SPINE CENTER TEAM

## Neurosurgeons and Orthopedic Surgeons

Neurosurgeons and orthopedic surgeons are highly skilled physicians who perform spine surgery.

## Physician Assistant (PA) and Nurse Practitioner (NP)

Assist the surgeon with hospital visits, during surgery and in the office.

## Hospitalists

Doctors who specialize in hospital care, who may attend to your medical needs while you are in the hospital.

## Spine Patient Navigator

The Spine Patient Navigator is a role unique to the Sentara Spine Center. Sentara has learned that spine patients benefit from having a central point of contact to help coordinate care. The Navigator assists with coordinating patient care needs from the surgeon's office to the hospital and after the patient is discharged from the hospital, including:

- Providing pre and postoperative education
- Answering questions
- Acting as an advocate before and after surgery

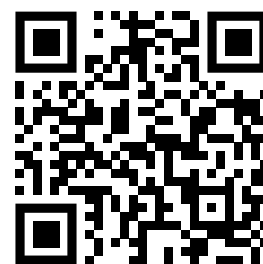
Contact the Navigator with any questions or concerns.

### TIPS for SUCCESS

Visit [SentaraSpineEducation.com](https://SentaraSpineEducation.com). Click on locations and find the hospital where you will be having surgery. There you will find helpful information, including the phone number of your Spine Patient Navigator (or use this QR code).

Write down your Spine Patient Navigator information here:

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### **Registered Nurse (RN) or Licensed Practical Nurse (LPN)**

An RN will provide much of your care. Nurses are responsible for your daily care and ensure physicians' orders are completed.

### **Physical Therapist (PT)**

A PT will guide your return to daily activities. Your PT will train you and your coach in safe transfer techniques, how to maintain spinal precautions and walking exercises to regain your strength and motion after surgery.

### **Occupational Therapist (OT)**

If ordered by your surgeon, an OT may guide you on performing daily tasks after surgery, such as bathing and dressing. Your OT may also educate you on special equipment you may need in your home during recovery.

## **Importance of Your Coach**

The people you interact with in your daily life, especially friends and family, are important to you. The involvement of a relative or family friend acting as your Coach is very important.

Your Coach should participate in preoperative education, give support during exercise sessions and keep you focused on healing. Your Coach should encourage you to maintain your exercise program and promote safety while recovering.

Your Coach can be one person or a team of people. Consider the following:

- spouse
- partner
- friends
- neighbors
- church members
- sorority sisters
- extended family members



Patients play a key role in ensuring a successful recovery and are involved in every step of our program.

### **Integrated Care Management (ICM)/Medical Social Worker (MSW)**

ICMs and MSWs may assist you with any post-discharge needs you have.

### **Certified Nurse Assistants/Nursing Care Partners**

These team members assist the nursing staff with your daily care.

### **Volunteers**

Volunteers assist patients as requested by the clinical team.

### **Orthopedic/Spine Techs**

These team members assist you with mobility. They will help you safely move around your room and in the hall when appropriate.

### **Other Specialists**

Throughout your spine surgery journey, you may have other specialists involved in your care. This could include a registered dietitian, diabetes educator or another medical specialist.

# PREPARE YOUR HOME FOR YOUR RETURN

**This checklist provides some ideas that spine surgery patients have found helpful:**

Put things that you use often (remote control, phone charger, etc.) on a shelf or surface that is easy to reach.

Check railings to make sure they are not loose.

Do laundry prior to leaving for surgery and put it away.

Put clean linens on the bed.

Prepare meals and freeze them in single-serving containers.

Tend to the garden, and finish any other yard work.

Store throw rugs and tack down loose carpeting.

Remove electrical cords and other obstructions from walkways.

Install night lights in bathrooms, bedrooms and hallways.

Consider installing grab bars in the shower/ bathtub. Put adhesive slip strips in the bottom of the tub.

If your pet remains in your home, be aware of your pet's location so that you do not trip or lose your balance.





## Medical Clearance for Surgery

When your surgery was scheduled, your surgeon discussed medical clearance with you. Certain blood tests (and other testing) will be required before your surgery.

Be sure to review your medication list with members of your healthcare team (this includes anything you put on yourself or consume, including ear drops, eye drops, supplements, vitamins, creams, ointments, patches and suppositories).

## Put Healthcare Decisions in Writing

Sentara places patients' wishes and individual preferences at the forefront of their care. Upon arrival for your surgery, a staff member will ask if you have an advance directive. If you do, please bring a copy to the hospital so the document can become a part of your medical record. An advance directive is not a requirement for admission.



## Smoking Cessation

It is recommended that you stop smoking. Smoking delays the healing process. It can impair oxygen circulation to your spine, which is vital to the healing process. Smoking reduces the size of your blood vessels and decreases the amount of oxygen circulating in your blood. Smoking can also increase clotting, which can cause problems with your heart. Smoking increases your blood pressure and heart rate. Quitting smoking will increase your ability to heal. If you need help quitting smoking, ask about hospital resources.

## Recreational Substances

If you consume alcohol and/or recreational drugs regularly, you should discuss this with your physician. If you see a pain management physician, please discuss this with your surgeon.

# GENERAL DIET CONSIDERATIONS

What you eat plays an important role in helping you recover from surgery and lifelong health.

## Food Choices for Overall Health

Protein is necessary for healing after surgery, and it can be obtained from foods such as meats, cheese, eggs, whole grains, and legumes. Eating a well-balanced diet with enough calories, protein, vitamins and minerals will help speed up recovery. If you have previously been on a diabetic, renal or low-sodium diet, continue to follow those guidelines. If you're missing out on these foods, you may want to talk to your doctor about supplements. Supplements can sometimes interact with other medications, so be sure to choose supplements with the help of a health care provider.

## Weight Control

Maintaining a healthy weight helps with mobility after surgery. It is important to be mindful of body weight when preparing for and recovering from surgery.

## Blood Sugar Control

High blood sugar levels can result in a number of undesirable side effects following spine surgery. These may include:

- Increasing your risk of infection
- Poor, slow wound healing

If you have diabetes or pre-diabetes, it is especially important to comply with your balanced meal plan (including portion size) and medication regimens during the period of time surrounding surgery.

The better you control your blood sugar, the less impact diabetes will have on your overall health and the better outcome you will have following spine surgery.

If you would like to get more information about diabetes or pre-diabetes, or need additional resources to help with weight loss, please contact your primary care provider.

What you eat plays an important role in helping you recover from surgery as well as lifelong bone health.

# PREPARING FOR YOUR DISCHARGE

## Coach's Checklist

Pain medication do's and don'ts

### **Signs and symptoms of infection —**

Please contact your surgeon's office if you experience any of the following:

- Temperature greater than 101 degrees Fahrenheit and chills
- Any drainage from the incision
- Increased swelling, redness at the incision
- Increased pain/tenderness at the incision that is not relieved by pain medication
- Symptoms worse than before surgery

How to use the incentive spirometer - use 10 times every hour while awake for the next two weeks

### **Signs and symptoms of a blood clot —**

Please contact your surgeon's office if you experience any of the following:

- Swelling in the thigh, calf or ankle that does not go down with elevation of the legs
- Pain, heat and/or tenderness in the leg(s)

### **Signs and symptoms of a pulmonary embolism — this is an emergency, and you should call-911**

If you experience:

- Sudden chest pain
- Difficulty breathing or shortness of breath

Spinal precautions (No BLT – Bending, Lifting, Twisting)

How to assist the patient out of bed

How to help the patient up and down stairs

*Coach's checklist is continued on the next page.*

### Coach's Checklist, continued

- Equipment use/bracing, if ordered
- Diet restrictions and recommendations
- Smoking cessation, if needed
- Constipation prevention
- Incisional care

Be sure to keep all follow-up appointments with your surgeon's office.

If you have any questions or concerns, please ask a member of the Sentara Spine Center before discharge.





Learn more about the benefits of recovering at home on [page 32–34](#).

## Planning For Discharge

Spine surgery is an elective, planned procedure, and knowing your discharge plan is a key part of your recovery process. Most patients go home; it is usually best to heal in the comfort of your own surroundings.

It's important to make arrangements before surgery for your Coach to stay with you at home.

## Going Home

Please arrange transportation home. You will receive written discharge instructions concerning medications, activity recommendations, etc. A member of your care team will discuss options for any equipment you may need. Be sure to take this guidebook home with you to use as a reference.





The more you know about your surgery, the better prepared you will be for your recovery.

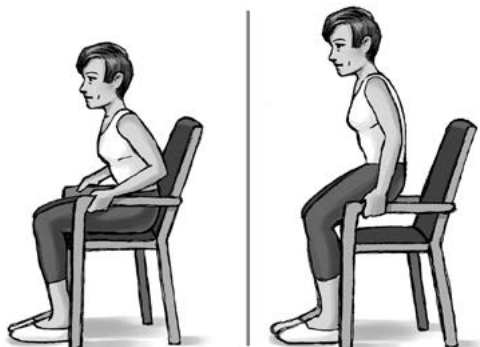
### Start Preoperative Exercises

Exercise is important in the rehabilitation process following spine surgery, but it is recommended that you participate in a preoperative exercise program as well. The exercises starting on [page 14](#) will help strengthen and condition your muscles in preparation for surgery and during the post-rehabilitation phase. To enhance your recovery from surgery, try incorporating these exercises, and walking, into your daily routine. Past patients have mentioned how helpful it was to take time to strengthen the muscles in their arms/legs prior to surgery.

After surgery, you will need strength in your arms for mobility. You will use your arms to help get in and out of bed, a chair, and on and off the toilet. Some patients may need to use a front-wheel walker during recovery, which also requires arm strength. Chair pushups can be done to strengthen your arms. You should also exercise your heart and lungs by walking for 10-15 minutes each day as tolerated.

# CERVICAL SURGERY

## PREOPERATIVE EXERCISES



### Chair Pushup

- Sit in chair. Use arms to push body up from chair.
- Keep elbows slightly bent and feet on floor. Return to chair slowly.
- Focus on using arms instead of your legs.
- Hold 5–10 seconds.
- Repeat 10 times.
- Complete 1–2 sessions per day.



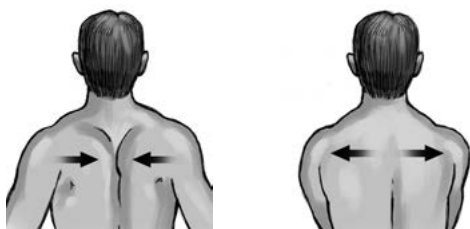
### Long Arc Quad (Knee Extension)

- Sit in chair with knees bent to 90 degrees.
- Straighten leg. Return to start position.
- Hold 5–10 seconds.
- Repeat 10 times.
- Rest 1 minute between each set.
- Complete 3 sessions every other day.



### Shoulder Circles

- Use a circular motion.
- Do 10 reps forward and 10 reps backward. (Each set equals 10 reps forward and 10 reps backward.)
- Complete 2 sessions per day.



### Scapular Retraction

- Pinch shoulder blades together. Do not shrug shoulders.
- Hold 5–10 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.

### 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.
- If you can't breathe comfortably, you are trying to tighten muscles too much.
- Hold 10–15 seconds.
- Repeat 20 times.
- Complete 2 sessions per day.

**Coach's Note:** This exercise is the beginning of a life-long challenge of being able to keep abdominal muscles tightened all day long. Strengthened muscles provide continuous support for the spine.



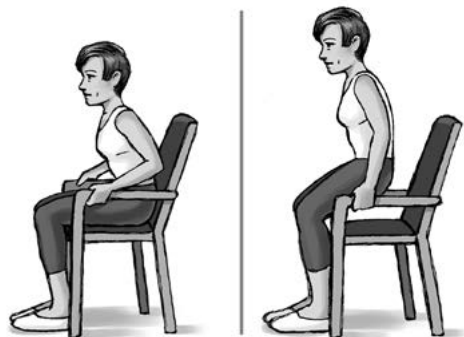
### Heel Slides (Slide Heel Up and Down)

- Lie flat on back. Slide heel toward your bottom.
- Keep your opposite knee bent to support your back. Repeat with other leg.
- Repeat 20 times.
- Complete 2 sessions per day.



# LUMBAR SURGERY

## PREOPERATIVE EXERCISES



### Chair Pushup

- 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.
- Hold 5–10 seconds.
- Repeat 10 times.
- Complete 1–2 sessions per day.



### Long Arc Quad (Knee Extension)

- Sit in chair with knees bent to 90 degrees. Straighten injured leg.
- Return to start position and repeat.
- Repeat 10 times, each leg. (Each set equals 10 reps.)
- Rest 1 minute between sets.
- Complete 1 session every other day.



### Heel Slides (Slide Heel Up and Down)

- Lie flat on back. Slide heel toward your bottom.
- Keep opposite knee bent to support your back.
- Hold for 10–15 seconds.
- Repeat with other leg.
- Repeat 20 reps. (Each set equals 20 reps.)
- Complete 2 sessions per day.

### 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.
- If you can't breathe comfortably, you are trying to tighten muscles too much.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 1 session 2 times per day.

**Coach's 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 the spine.



### 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.
- Hold as indicated for 10–15 seconds.
- Do not hold your breath.
- Repeat with other leg.
- Repeat 20 reps. (Each set equals 20 reps.)
- Complete 2 sessions per day.





# YOUR MEDICATION LIST

You will be given specific instructions about medications and dosages, including when to stop some of them. Please follow the instructions carefully.

Prepare and review a medication list before surgery. Make sure to include prescription medications, over-the-counter (OTC) medications, supplements, and natural herbs (including patches, creams, drops, etc.) on the list below or if you already have your own list made. Check your Sentara MyChart and make sure all your medications are current.

This list is very helpful with your admission process and direct patient care at the hospital. Do not forget to bring it in with you on the day of surgery.

**This list is for the medications you are currently taking (prior to surgery). There is a spot for you to write down your postoperative pain medication instructions on [page 26](#) and medications for blood clot prevention on [page 38](#).**

| Drug Name | How much will I take? | When do I take it? | Why was I given it? (e.g., relieve pain) | Instructions I was given about use before and after surgery. |
|-----------|-----------------------|--------------------|--|--|
|           |                       |                    |  |  |
|           |                       |                    |  |  |
|           |                       |                    |  |  |
|           |                       |                    |  |  |
|           |                       |                    |  |  |
|           |                       |                    |  |  |

| Drug Name | How much do you take? | When do you take it? | Why do you take it? (e.g., high blood pressure) | Instructions I was given about use before and after surgery. |
|-----------|-----------------------|----------------------|---|--|
|           |                       |                      |   |  |
|           |                       |                      |   |  |
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|           |                       |                      |   |  |
|           |                       |                      |   |  |

**Make a quick note of any specific medication questions you want to ask your doctor.**

**Allergies:**

Remember to include ALL of the medications and supplements you take.

# UNDERSTANDING YOUR SURGERY AND ANESTHESIA

## **What will happen before my surgery?**

You will meet your anesthesiologist the day of your surgery. Your anesthesiologist will review all information needed to evaluate your general health, including your medical history, laboratory test results, allergies and current medications.

The anesthesiologist will answer any further questions about your anesthesia. You will also meet your surgical nurses.

Intravenous (IV) fluids will be started, and preoperative medications may be given if needed. Once you are in the operating room, monitoring devices will be attached such as a blood pressure cuff, EKG and other devices for your safety. At this point, you will be ready for anesthesia.

## **During surgery, what does my anesthesiologist do?**

Your anesthesiologist is responsible for your comfort and well-being before, during and immediately after your surgical procedure. The anesthesiologist will manage vital functions in the operating room, including heart rate and rhythm, blood pressure, body temperature and breathing. The anesthesiologist is also responsible for fluid replacement when necessary.

## **What can I expect after the operation?**

After surgery, you will be taken to the Post Anesthesia Care Unit (PACU), where trained nurses will closely monitor your breathing and heart function. During this period, you may be given extra oxygen.

## **What type of anesthesia is available?**

General anesthesia is the most common type of anesthesia for spine procedures.

## **Will I have any side effects?**

Your anesthesiologist will discuss the risks and benefits associated with the general anesthetic as well as any complications or side effects that can occur. Nausea or vomiting can occur postoperatively; although less of a problem today because of improved anesthetic agents and techniques, these side effects continue to occur for some patients. Medications to treat nausea and vomiting may be given if needed. Your doctors and nurses will use multi-modal interventions to reduce your pain level while keeping you safe, but do not expect to be totally pain-free. The staff will teach you the pain scale to better assess your pain level.

# PREPARING FOR YOUR SURGERY

## Check with Your Surgeon for Specific Instructions

### Preoperative Visit

You may have a preoperative appointment at your surgeon's office. This is a good time to ask any last-minute questions.

### Stop Medications that Increase Bleeding

Discontinue all anti-inflammatory medications such as aspirin, Motrin and naproxen. There are other medications that can cause increased bleeding such as Vitamin E, turmeric, garlic, fish oil, etc. If you are taking a blood thinner, you will need special instructions from your physician to stop this medication.

### Stop Taking Herbal Supplements

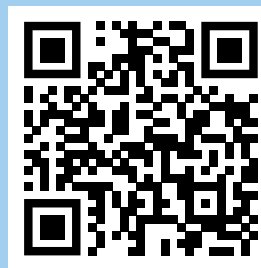
Some herbal supplements may interfere with other medicines. If you are taking herbal supplements, ask your doctor if you should stop taking them before surgery.

Reminder!  
After surgery, make sure to check with your surgeon before restarting any NSAIDs such as ibuprofen, naproxen, Advil, Aleve, Motrin and Meloxicam

## Preoperative Education

You should plan to participate in preoperative education before your surgery. It is strongly suggested that you invite a family member or friend to act as your "Coach." The Coach's role will be explained in your preoperative education.

For more information about preoperative education, contact your surgeon's office or visit [SentaraSpineEducation.com](http://SentaraSpineEducation.com) (or scan the QR code).



## Dental Care

Oral health and hygiene are important to healing and overall wellness.

Please check with your surgeon for their recommendations about having a dental exam before your surgery. Most dental issues need to be cared for before having spine surgery. You do not want to develop an issue with a loose filling, a cavity or other problems during your recovery.

There may be a waiting period after your spine surgery before you can have dental procedures (including cleanings).

After surgery, please be sure to talk with your surgeon about the possible need to take antibiotics before dental work.

## Night and Morning Before Surgery

### Skin Preparation

You will be given specific instructions about skin preparation before surgery. Please follow the instructions carefully. The final steps of skin preparation will take place in the preoperative area at the hospital. Your skin preparation includes:

- Shower with pre-surgical wash as directed
- Do not shave your surgical site within 3 days prior to your surgery (i.e., your face/neck if you are having surgery on the cervical area of your spine)

### Food and Liquid Consumption

You will be given specific instructions about eating and drinking before surgery. Please review these instructions and follow them carefully.

## What to Bring to the Hospital

You are encouraged to bring comfortable clothes and personal hygiene items to use. Clothes with elastic waistbands are recommended; zippers and buttons should be avoided. If you use a CPAP machine, please bring it with you to the hospital. You may want to bring hearing aids, dentures, glasses, and containers to keep them in. If you bring any item that has a container, PLEASE bring the container for safe-keeping of your item or device.

For safety reasons, please do not bring electrical items such as fans or electric blankets. You may bring battery-operated items. Cell phones, laptops and tablets are permitted for use in your room. Remember to bring chargers for those items.





## Reminder!

Please remove fingernail and toenail polish, including acrylic nails, prior to surgery.

### Please be sure to bring the following to the hospital:

- Items that might ease your anxiety or pass the time, such as headphones, reading material, etc.
- This guidebook
- A copy of your advance directive (living will) if you have one.
- Your insurance card, driver's license or photo I.D. If you choose to fill your prescriptions at a Sentara To Home pharmacy before discharge, there may be a copay required.
- If your insurance requires a copay and you have not already taken care of it prior to the day of surgery, it may be collected at the time of your arrival.
- Comfortable clothes to wear after surgery (T-shirt, shorts, flat shoes or tennis shoes)
- If you have already been pre-fitted for a brace or a walker, have someone bring it to the hospital the day of your surgery and your physical therapist will check it for safety and fit.
- CPAP, if you use one. Know your settings and bring all of the parts. We will provide the water.
- Medication list

### Please do not bring to the hospital:

- Jewelry
- Valuables

# DAY OF SURGERY

## Sentara Spine Center

1. After you are cleared by the PACU team, you will be taken to your room or discharged home.
2. You can expect to be up and moving within hours after your surgery.
3. It is important to begin your ankle pump exercises. Go to [page 58](#) for instructions.
4. You should also begin breathing exercises using an incentive spirometer as directed. For directions on using an incentive spirometer, see [page 29](#).

## Day of Surgery/Preoperative Preparation

Arrive at the hospital as you were instructed in your preoperative phone call. Prompt arrival allows staff sufficient time to prepare you for surgery. Preparation for surgery includes these activities:

- A nurse and an anesthesiologist will interview you.
- A nurse will start your IV.
- Antibiotics will be administered through your IV as ordered.
- Your surgical site will be prepared.
- Your surgeon will visit with you to mark your surgical site and answer any questions you may have.
- Other preparatory activities, if necessary.

## Post Anesthesia Care Unit (PACU)

Immediately following surgery, you will be taken to a recovery unit. During this time, pain control is typically established and your vital signs are monitored. The PACU (Post Anesthesia Care Unit) team will make every effort to make you as comfortable as possible.

Your safety is our greatest concern. Pain medications, equipment and surgery increase your risk for falling. Never attempt to get out of bed without calling for assistance and having a spine care team member present.



### **Enhanced Recovery After Surgery for Pain**

Controlling pain is a key to enhanced recovery after surgery. Your care team will use a combination of non-narcotic pain medication along with other techniques to manage your pain. This is called a multi-modal approach. Key components when addressing pain include:

- Starting pain control before surgery
- Managing pain using different types of medications and techniques after surgery

### **Understanding Pain and Your Role**

You play a major role in controlling your postoperative pain! It is easier to prevent the pain from becoming out of control rather than to manage it once it becomes intense. Remember to take your pain medication with food to decrease the risk of nausea.

Notify your nurse when you feel pain or discomfort that affects your ability to carry on a conversation, sleep at night or participate in physical therapy. Make sure to tell your nurse and caregivers if your pain is not being controlled with the medication you have been given.

## Types of Pain and Pain Management

There are different types of pain and how they are managed varies as well. Describe the type of pain you are experiencing to your care team when you are in pain.

### Incisional:

- Often described as a feeling of soreness and pressure
- Treated with oral pain medications or ice

### Muscle Spasm:

- Often described as a tight, grabbing sensation that makes it uncomfortable to move
- Treated with a muscle relaxant, positioning or bracing

### Nerve Pain:

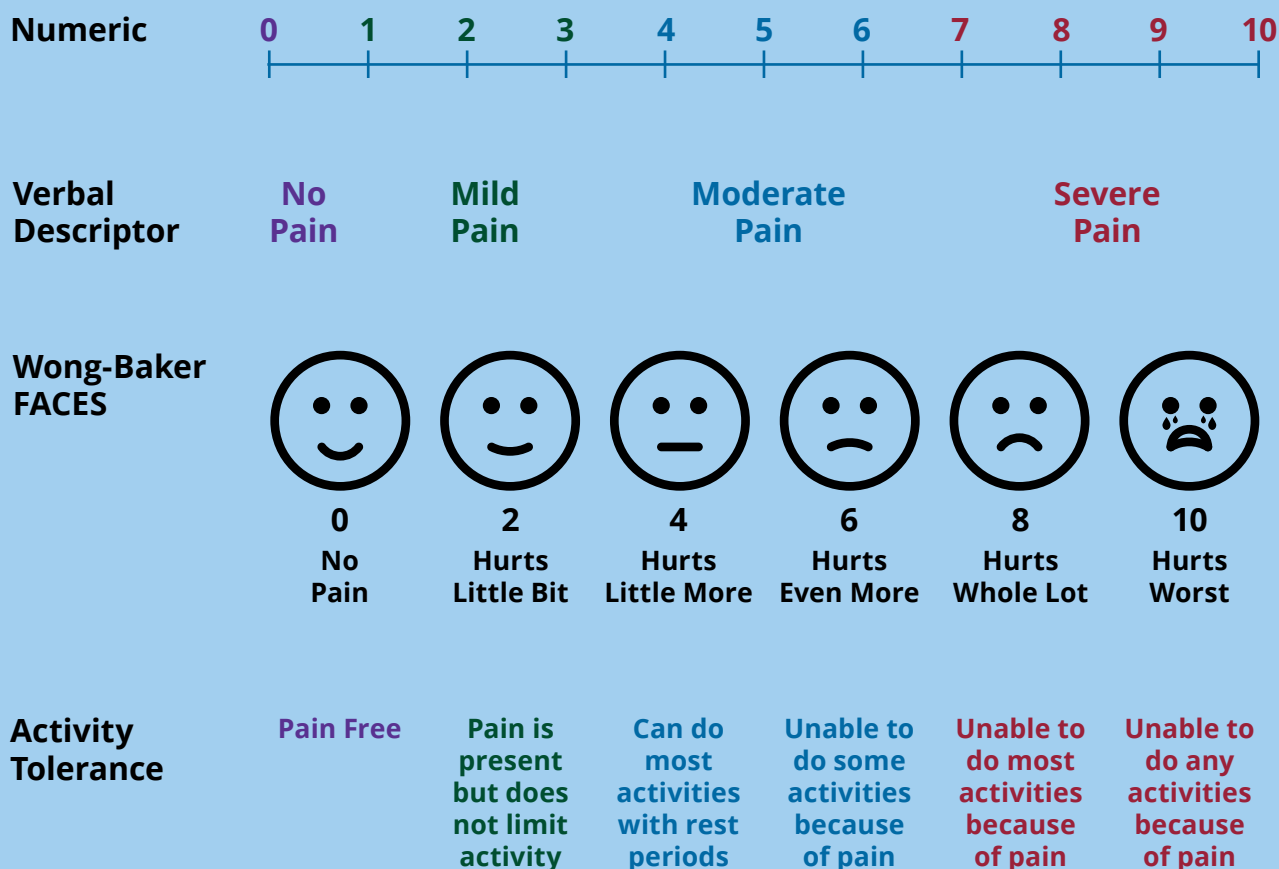
- Often described as numbness, tingling, shooting pain or a hot pain
- Treated with medications specifically for nerve pain

**Write down the medications and instructions you were given for postoperative pain medication:**

| Drug Name | How much will I take? | When do I take it? | Why was I given it? (e.g., relieve pain) | Instructions I was given about the medication. |
|-----------|-----------------------|--------------------|--|--|
|           |                       |                    |  |  |
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|           |                       |                    |  |  |
|           |                       |                    |  |  |
|           |                       |                    |  |  |

## Pain Scale

A pain scale will be used to keep you involved in the management of your pain. Assigning a number to the level of pain you are experiencing will help clinicians understand the severity and make decisions on how to best manage your pain. A score of "0" means you have no pain and "10" means you are in the worst possible pain.



You will have discomfort or pain postoperatively. The team will work to manage it so that you can eat, sleep and be mobile.



## Pain Control

Everyone experiences pain differently. It is important to stay ahead of your pain and consider more than one approach to managing it. Here are some helpful tools and things to know about pain control:

- Consider alternative approaches to pain relief such as breathing exercises, ice, walking or changing positions, music, meditation, and distraction (coloring, movies, etc.). Be creative.
- Our goal is not to make you pain-free, but aim to safely manage the discomfort so that you can eat, sleep, move around, walk and participate in therapy.
- Once your pain is under control, think about tapering your pain medication.

## Breathing Exercises

Techniques such as deep breathing, coughing and use of an incentive spirometer can reduce the risk of pneumonia, a potential complication after surgery. These techniques are described below. While in the hospital, you will be using an incentive spirometer as instructed by your care team.

### Deep Breathing

- To deep breathe, you must use the muscles of your abdomen and chest.
- Breathe in through your nose as deeply as you can.
- Hold your breath for 2 – 3 seconds.
- Let your breath out slowly through your mouth. As you breathe out, do it slowly and completely. Breathe out as if you are blowing out a candle (this is called “pursed lip breathing”). When you do this correctly, you should notice your stomach going in. Breathe out for 10 – 20 seconds.
- Take a break and then repeat the exercise 10 times.



### TIPS for SUCCESS

Deep breathing, coughing and using an incentive spirometer can reduce the risk of pneumonia.



### **Coughing**

- 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 emptying your chest completely.
- Repeat with another breath in the same way.
- Take another breath and hold it for the count of three, then cough hard. When you cough, focus on emptying your lungs.
- Repeat all steps twice.

### **Incentive Spirometer**

You will receive an incentive spirometer. Proper use will help keep your lungs clear. It is recommended that you take 10 deep breaths every hour while awake. You should continue to use your incentive spirometer as directed when you leave the hospital.

# AFTER SURGERY



It is our commitment to keep you informed and involved in your care. Discuss with your surgeon and care team regarding your estimated discharge date so you are prepared to go home.

## Transportation Plan

Write down your:

Coach: \_\_\_\_\_

Ride Home: \_\_\_\_\_

Backup: \_\_\_\_\_

Be sure to take your guidebook home with you to use as a reference.

Depending on the time of your surgery, someone from the physical therapy department may work with you on the same day. They will assess your safety and therapy needs. You may be out of bed and up the same day as surgery. Your Coach is encouraged to observe while you are working with physical therapists to help ensure a smooth transition home.

## Post-Op Day 1

The day after your surgery may begin as early as 5 a.m. You can expect to be helped out of bed and seated in a recliner in your room. A physical therapist will assess your progress. Your Coach is encouraged to observe while you are working with physical therapy.

## Going Home

In preparation for your discharge, your transition team will be working on identifying any equipment or assistance needs you may have at home.

## Transportation Plan

Write down your Coach, your ride home from the hospital and a backup plan.



## Prescriptions

You will receive written discharge instructions concerning medications, activity, etc. It's important to have your pain medications filled before you leave the hospital. The Sentara To Home pharmacy (located in most Sentara hospitals) can conveniently fill your prescriptions for you. Sentara To Home pharmacy is available Monday–Friday; hours vary by location. If you prefer to have them filled by an outside pharmacy, notify your care team.



Find the hours and locations of our Sentara To Home pharmacies at [Sentara.com/SentaraToHome](https://www.sentara.com/SentaraToHome) or use this QR code.

# TOP 10 REASONS TO HEAL AT HOME

1

## **Healing at Home Reduces Your Risk of Getting Germs.**

Exposure to germs can increase your chance of getting healthcare-associated infections (HAIs). HAIs are illnesses caused by germs that people get while receiving care at a healthcare facility. HAIs can happen in any healthcare setting and are caused by bacteria, fungi or other less common infections.

We take specific precautions to prevent HAIs. We want to avoid an HAI even after your stay at the hospital! While the home is not perfectly clean, there is a lower chance of getting germs there. Those germs that people might get at home are less dangerous and there is less opportunity for spreading infections from patient to patient.

- Make sure your sheets, clothing and home are clean before returning home. Have extra bottles of hand sanitizer for guests and family members.

2

## **You Have Control of Your Environment.**

Preparing your home before surgery will make coming home so much easier. Small things like installing night lights and doing the laundry in advance allows you to relax and focus on getting better. Pre-made meals from the freezer are an easy way to prepare a quick, healthy meal.

- Move frequently used items to the countertop level and remove throw rugs to lower the risk of falling.

3

## **You Are Not Alone. We're Here to Help.**

Please know that the hospital team will only send you home when you are ready. Most patients go directly from the hospital to home to recover. Once you are settled at home, you still have access to help, including the Patient Navigator, your Coach and your surgeon's office.

- If needed, the therapists in the hospital will prepare you to get around your home safely. This includes walking up and down stairs and getting in and out of a car.

## 4

**You Have More Privacy.**

As much as we respect your privacy in the hospital, nothing can compare with the comfort and privacy of your home.

- **Remember:** Your Coach or other friend or family member will need to stay with you for at least the first two days.
- After the first couple of days, you may be able to do more than you thought. Nevertheless, it is a good idea to have someone come by and help with meals and housework.



## 5

**You Are Prepared and Know What to Expect.**

Participating in Preoperative Education will prepare you for an even better surgery experience. You have this Patient and Family Guidebook with details about what to expect before, during and after your surgery. Additionally, the Patient Navigator is available Monday–Friday for your questions or concerns.

- There is also a video online that is available 24 hours a day for your viewing. This can be shared with friends and family, too:  
[SentaraSpineEducation.com](http://SentaraSpineEducation.com)

## 6

**You Will Get Better Sleep at Home.**

Sleep is the body's time to rebuild, restore and get well. Naturally, it is most important to have quality sleep to get better after surgery. You are more likely to get the best sleep at home in your own bed. At home you will not have constant interruptions such as talking, equipment sounds and unfamiliar beds. These interruptions can cause you to not have enough sleep, which can slow down the healing process.



7

**You Will Get Back to Your Schedule Quicker.**

The pace of your hospital stay can blur the days together. Going home can provide the opportunity to resume your normal routine sooner. Being in your home and having family and friends stop by for a visit can be helpful. It will lift your spirits and keep you alert and active.

- Try to avoid too much napping during the day for a better quality of sleep at night. Eating small meals on a regular basis throughout the day may be more appetizing than three large meals.
- Remember to keep hydrated and eat fiber-rich meals to keep your bowels regular.

8

**At Home You Are in Charge of Medication Timing.**

At home, you are in control of receiving your medications at the prescribed times. Setting an alarm can help you stay on schedule.

9

**You Are Like No Other. Neither is Your Recovery.**

Before you even arrived at the hospital, you had a personalized plan for what to do after your surgery. Your surgeon will specify your plan in your discharge instructions.

- Talk to your surgeon about what will be recommended for your recovery and make sure you keep your appointment for your follow-up visit with your surgeon.
- Outpatient therapy is sometimes ordered by your surgeon later in your recovery path. This allows the spine a chance to heal.

10

**Home May Be the Most Cost-Effective Recovery Option.**

Each insurer offers a unique set of benefits that will determine any out-of-pocket expenses. Make sure you evaluate your recovery options and financial obligations.

# CARING FOR YOURSELF AT HOME

When you go home, there are a variety of things you need to know for your safety, recovery and comfort.

## Comfort Tips

- Gradually wean yourself from prescription medication to a non-prescription pain reliever as directed by your physician.
- Change your position every 45 minutes.
- Use ice/cold packs for pain control as directed. Applying ice/cold packs to your affected surgical site will decrease discomfort.

A bag of frozen peas can be used as an ice pack, or you can make your own ice pack by combining one cup of rubbing alcohol and three cups of water in a 1-gallon resealable bag (double bag to prevent leaks). Place this in the freezer until it turns into slush.

## Body Changes

- Drink plenty of fluids to keep from getting dehydrated. Your desire for solid food will return.
- A high-protein diet will promote wound healing.
- Do not sleep or nap too much during the day. You need to be up and moving.
- 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. A high-fiber diet can also help ease constipation. If you do not have a bowel movement in three days, call your surgeon's office.

## Fall Prevention

Since your ability to bend, lift and twist will be limited after surgery, preparing your home is an important part of your recovery.

Review the checklist on [page 7](#) and tips on [page 40](#).

While you are recovering, try not to nap too much during the day so that you will sleep better at night.

# WHEN YOU ARE AT HOME AFTER SURGERY



## **Red Zone — You are in the Red Zone; take action now.**

- Chest pain
- Shortness of breath
- Fall (with pain/injury/loss of consciousness)
- Call 911 right away!



## **Yellow Zone — You are in the Yellow Zone; call right away.**

**ACTION: Call Day, Night or Weekend for the following symptoms as directed by your care team.**

- Temp greater than 101°F with chills, sweating, shaking
- Changes in your incision — significant swelling or redness around the incision
- Increased drainage (foul odor or cloudy color)
- Uncontrolled pain
- New onset weakness
- No bowel movement in 3 days
- Fall without injury or loss of consciousness



## **Green Zone — You are in the Green Zone; right where you need to be.**

- Bruising and swelling of the surgical incision
- Walking as tolerated
- Pain okay with medication
- Normal bowel pattern

**ACTION:**

- Do ankle pumps to prevent blood clots

## **Remember**

- Keep ALL appointments
- Take all medications as ordered
- Drink plenty of water and choose healthy foods to eat
- Use the incentive spirometer as directed in your After Visit Summary

## Recognizing and Preventing Potential Complications and Infection

### Signs of Infection Requiring Immediate Attention

- Increased swelling and redness at the incision site
- Change in color, amount, and odor of drainage
- Increased pain not relieved by pain medication
- Fever greater than 101.0 degrees

### Prevention of Infection

- Take proper care of your incision as ordered by your surgeon.
- Talk with your surgeon and ask if you will need to take antibiotics for future procedures.
- Update your healthcare providers, including your dentist, that you have had recent spine surgery.
- Wash your hands before and after using the bathroom. Ensure all visitors do the same. Keep hand sanitizer in convenient locations and use it often.

### Incision Care

- Follow the instructions given to you when you were discharged.
- Your surgeon will inform you when you may shower.
- If there is increased drainage, redness, pain, odor or heat around the incision, call your surgeon or a medical professional involved in your postoperative care.
- Take your temperature if you feel warm or sick. Call your surgeon if your temperature exceeds 101.0 degrees.

### Blood Thinners

After surgery, there is an increased risk of blood clots. Discuss the need for a blood thinner with your surgeon.





**Reduce the Risk of Blood Clots in the Legs**

- Perform ankle pumps.
- Wear your compression stockings, if prescribed.
- Walk several times a day.
- Take your blood thinner, if prescribed.

A deep vein thrombosis (DVT)—a type of blood clot—can form in either leg.

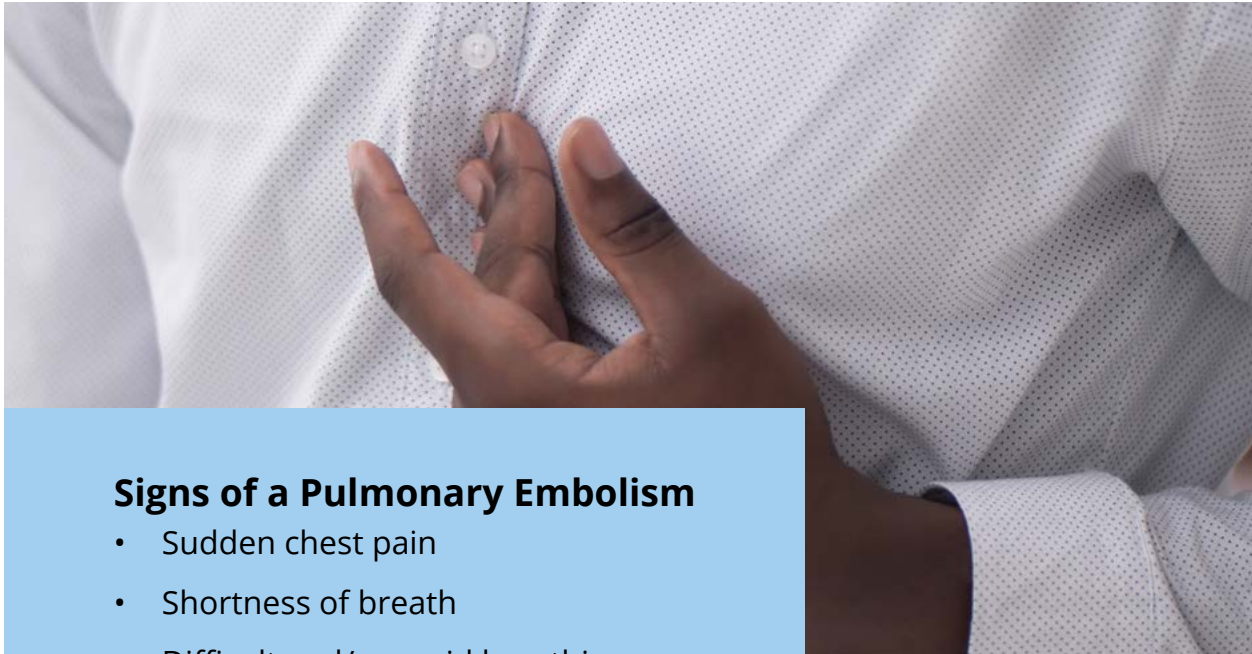
**Signs of Blood Clots in the Legs**

Please notify your surgeon if you experience:

- Swelling in thigh, calf or ankle that does not go down with elevation
- Pain, heat, redness and/or tenderness in the calf or groin area

Write down the medications and instructions you were given for postoperative blood clot prevention:

| Drug Name | How much will I take? | When do I take it? | Why was I given it? (e.g., reduces the chances of a blood clot forming) | Instructions I was given about the medication. |
|-----------|-----------------------|--------------------|---|--|
|           |                       |                    |   |  |
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### Signs of a Pulmonary Embolism

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

### Pulmonary Embolism

If you have a deep vein thrombosis (DVT)—a type of blood clot—a portion of it could break away, and travel to the lungs. This may cause chest pain and/or shortness of breath. **A pulmonary embolism is an emergency. You should call 911 if you suspect a pulmonary embolism.**

### Prevention of Pulmonary Embolism

Take these steps to reduce the risk of developing a blood clot that could cause a pulmonary embolism.

- Perform ankle pumps.
- Wear your compression stockings, if prescribed.
- Walk several times a day.
- Take your blood thinner, if prescribed.

Let your surgeon know if you experience issues such as increased pain or swelling in one or both legs.



# AFTER YOUR SPINE SURGERY

## Around the House

### Kitchen and Bathroom

- 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.
- Use a high stool or put cushions on your chair to provide a better working height when preparing meals

### Safety and Avoiding Falls

- Keep one foot propped up to reduce stress on your back. For example, when standing at the kitchen sink, open an under-sink cabinet and place one foot just inside the cabinet.
- Place frequently used items between your waist and shoulder level for easy access.
- Pick up throw rugs and tack down loose carpeting. Cover slippery surfaces with carpets that are firmly anchored to the floor or that have nonskid backs.
- Be aware of all floor hazards such as pets, small objects or uneven surfaces. Your pets will be excited to see you! Have your Coach keep your animals secured until you are safely seated.
- Provide good lighting throughout your home. Install night lights 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 armrests to make it easier to get up. No rolling chairs, such as office chairs.
- Rise slowly from either a sitting or lying position to avoid getting lightheaded.
- Do not lift heavy objects for the first three months and then only with your surgeon's permission.
- Do not lift children until you are cleared to lift that weight limit and instructed on how to do so by your surgeon or therapist.



### Keep Moving

You should be on a regular exercise program three to four times per week, each session lasting 20-30 minutes

# CERVICAL SURGERY PRECAUTIONS



## No Bending

- Keep head straight and facing forward. Do not tilt head side-to-side, forward or backward.
- 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.

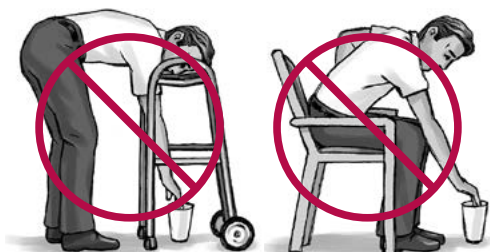
## No Lifting

- Speak to your surgeon about restrictions on lifting.
- To lift an object, keep chest upright, bend at knees and hips and hold object close to body.

## No Twisting

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

# LUMBAR SURGERY PRECAUTIONS



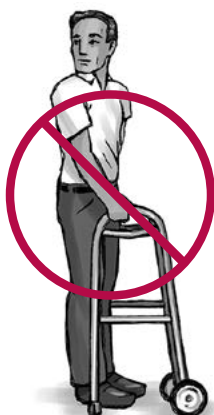
## No Bending

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



## No Lifting

- Speak to your surgeon about restrictions on lifting.
- Once cleared to lift by your surgeon, the appropriate way to lift an object is to keep your chest upright, bend at the knees and hips, and hold the object close to your body.



## No Twisting

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

# CERVICAL SURGERY NECK BRACES

## Soft Collar

The least restrictive and least supportive of all cervical braces is the soft collar. Patients may be instructed to wear the soft collar at all times or only when out of bed. The soft collar is simple to put on and only requires fastening a strap at the back of the neck. The chin should rest on a small divot in front of the collar. Be careful not to turn your head side to side in this brace, as it will not prevent you from performing this motion.

**Care and Cleaning:** Hand wash with mild soap in warm (not hot) water. Rinse well and air dry. **Do not machine wash, tumble dry, dry clean, or use bleach or fabric softeners.**



## Aspen™ Cervical Collar

The Aspen™ Cervical Collar is a firm brace that is sometimes used after surgery or neck trauma to prevent motion and provide support. It is made of plastic with soft foam pads that fasten to the plastic. The foam pads can be removed to launder and air dry. Your chin should rest on the chin trough at the center, and then the straps should be fastened securely. An orthotist or member of the Spine Center care team should make sure this brace is adjusted correctly to your size.

**Care and Cleaning:** Wipe the plastic collar shells clean with mild soap and water. Hand wash the pads with soap and water. Rinse out all soap. Gently squeeze out excess water. Allow to air dry (6 to 8 hours). **Do not place pads in a washer or dryer.**



## Miami J™ Collar

The Miami J™ Collar is another firm brace that is sometimes used after surgery or neck trauma to prevent motion and provide support. It is made of plastic with soft foam pads that fasten to the plastic. The foam pads can be removed to launder and air dry. Your chin should rest on the chin trough at the center, and then the straps should be secured. An orthotist or member of the spine center care team should make sure this brace is adjusted correctly to your size.

**Care and Cleaning:** Remove the pads from the plastic shells. Hand wash the pads with mild soap and water. **Do not use harsh detergents or bleach.** Rinse. Wring out the excess water and squeeze in a towel. Lay flat to air dry. Wipe the plastic collar shells clean with mild soap and water. **Do not machine wash or tumble dry.**

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# ACTIVITIES OF DAILY LIVING FOR ALL SPINE PATIENTS

## Bed positioning

### Lying on Your Back

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

**Note:** Make sure the pillow behind your head supports your head and shoulders. Avoid large pillows, as they can push the head and neck forward. The goal is to choose a pillow that will keep the neck straight, not bent forward, backward, or to the side. Wear a cervical brace at all times as directed by your surgeon.



### Lying on Your Side

- With knees slightly bent up toward chest, place a pillow between the knees and one under the neck. This helps to keep optimal alignment of spine.
- Tighten abdominal muscles and log roll when changing positions.
- Adding a pillow under the 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 pillow under stomach to provide support for back.

**Note:** Do not sleep on a soft bed or a 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 up while lying on back. Then roll onto your side, keeping hips, shoulders and ears moving together to avoid twisting (i.e., roll like a log). As you slide your feet off the bed, use your arms to push up into a sitting position. Scoot your hips forward until feet are on the floor and you feel stable. Using your arms to help you scoot typically helps minimize pain. Scoot far enough forward so your feet are flat on the floor (heels included) to support your lower back.

### Returning to Bed

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

## Sitting Posture

Many patients choose to sleep in a recliner chair for a few days after having surgery. The adjustable back position of a recliner offers comfortable upright positioning for the head and neck, as well as armrests that support the arms. It may be easier to stand up from the chair instead of the bed.

## Position of Comfort

Immediately after surgery, patients may complain of neck and shoulder pain and have trouble finding a comfortable resting position. Placing pillows underneath the forearms and elbows may help reduce a pull on the neck and shoulder muscles while sitting in the recliner or lying in bed. Your therapist may suggest gel ice packs over your shoulder muscles to reduce soreness.





## Using a Walker

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

- Make sure your walker is properly fitted before using it. To check if your walker is the correct height, stand upright inside the walker with your arms slightly bent (about 15 degrees) and relaxed by your sides. The top of the walker grip should line up with the crease inside your wrist.
- Push up from the surface you are sitting on (e.g., bed or chair). Avoid pulling on the walker to stand. The walker could easily tip backward and will not offer optimal support to stand.
- It is easiest to stand up from chairs with armrests and from a bedside commode with armrests. Armrests give better leverage and control for you to stand up and sit down safely.
- A walker takes the pressure off your back. Push down through the walker with your arms as needed, without raising your shoulders or leaning too far forward.
- Keep your feet near the back of the walker frame or rear legs. Do not stand too close or too far from the walker.
- Stand up straight when you are walking. Keep your shoulders back, head and chest up and your stomach muscles tight.



- If there are wheels on your walker, you do not need to lift the walker. Just push the walker forward as you walk.
- Increase your frequency and distance. Go at your own pace. Frequent walks are very important to keep you moving and to decrease any stiffness and pain.
- 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.



## Transfers

### Getting Into a Chair

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

#### Special Instructions:

- Tighten your stomach muscles to provide support for your lower spine.
- Rest your feet firmly on the floor or on a foot stool. Do not let your feet dangle, as this will place additional stress on your spine.



### Getting Out of a Chair

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

#### Helpful Sitting Tips:

- Do not let your feet dangle when sitting. Have your feet firmly supported to prevent pulling at back.
- Protect your back by sitting in a chair with back support. Use a pillow or towel as a lumbar roll.





## From Bed

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



## Getting Into the Car

Back up to the car seat until you feel the seat at the back of your legs. Reach your hand behind you for the back of the seat, using the other hand to secure a spot on the frame or dashboard.

**Note:** The car door and walker are NOT secure options.

If you need to use the car door or walker, have someone hold the unsteady objects. Slowly lower to a sitting position. Scoot your hips back until you are securely on the seat.



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





### Getting Out of the Car

When getting out of the car, bring your legs out one at a time. Lead with your hips and shoulders and do not twist back. Place one hand on the back of the seat and one hand on the frame or dashboard. Push up to a standing position. Reach for the walker when you are stable.

#### Helpful Tips with Car Transfers:

- Have the seat positioned all the way back so you have maximum leg clearance.
- If you need one hand on the walker for leverage, have someone hold the walker down on the front bar for stability.

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



### Getting Onto the Commode

Back up to the commode like you would a chair. Without twisting to look, reach back for the handles of the commode chair (if needed) or toilet seat and squat, using your arms to help you slowly lower down to a sitting position. Your feet should be flat on the floor for support while sitting.





## Getting Off of the Commode

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



## Bathing

Stepping in/out of the tub:

- If your shower is part of the tub, hold onto the front wall of the shower and step in or out sideways versus stepping in forward. This side step places much less stress and motion on your lower spine.
- If you have a walk-in shower stall, step in, as usual, making sure not to twist as you turn to face the shower controls.
- You may want to have a bathtub or shower seat available for the first few days you shower. These items are inexpensive to purchase or can be borrowed.

**Note:** A small resin or plastic patio chair may work.

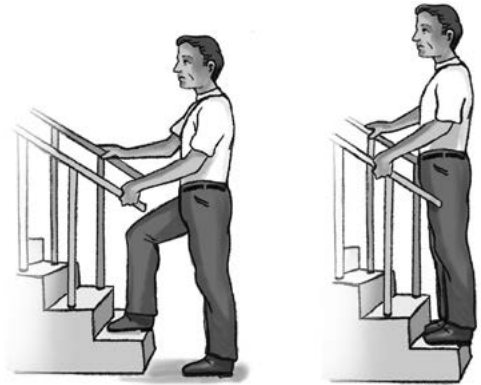


- Small tub/shower benches may be purchased at most drug stores or medical supply stores.
- Your surgeon will provide clearance on taking a tub bath or swimming.

## Using Stairs

### Negotiating Consecutive Steps

- Use a handrail and/or a cane for assistance.
- If one leg feels weaker than the other leg, go up the steps with your stronger leg first and down the steps with your weaker leg first. Remember, "Up with the good and down with the bad."
- If you are unsteady, take one step at a time. This will make negotiating steps easier and safer.
- Concentrate on what you are doing. Do not hurry.
- Since you should not bend your neck to look down, feel each step with your feet.
- Have someone assist or spot you as necessary or indicated by your therapist. The person should stand behind and slightly to your side when you are going up steps. When you are going down steps, the person should be in front of you.



### Negotiating the Curb or One Single Platform Step

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

### TIPS for SUCCESS

- Keep the steps clear of objects or loose items.
- Plan ahead, especially just after surgery, by keeping items in areas where you can limit stair use.
- Install one or two handrails. Two handrails will increase ease and safety when using steps.



## Personal Care

### Using a Reacher

Using a reacher limits the amount of bending required to dress. Sit down in a chair with your back supported. Use the reacher to hold the front of your undergarments or pants. Bring the garment over one foot at a time, pulling up the underwear, then pants up to 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 helps you obtain those items that fall while you are under “no bending” restrictions. Use it as an arm extension to reach the floor.



### Using a Sock Aid

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



### Removing a Sock with the Reacher

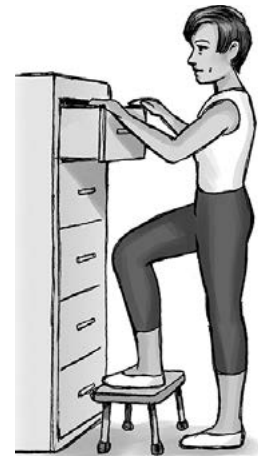
Use the black hook on the reacher to push the sock over the back of your heel. You may continue pushing the sock completely off your foot or use the jaw of the reacher to pull the sock entirely off your foot.

## Body Mechanics

This section will give general tips on how to practice and adapt safe body mechanics in everyday work activities. There is not only one correct way to do a task. It depends on your abilities. You may need to alter ways of moving based on your strength, flexibility, pain level and/or other medical conditions. Check with your surgeon or physical therapist for details.

### Standing

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



### Bending

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

### Turning

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

## Lifting

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

## Lifting Objects from the Floor

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



## Reaching

- Store commonly used items between your 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 your arms and legs (NOT BACK) to lift them.
- When getting 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 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 abdominal muscles.

## Moving Objects

- Keep your elbows close to your sides and use your total body weight and legs to push or pull.



# CERVICAL SURGERY

## POSTOPERATIVE EXERCISES – WEEKS 1-2

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



### Ankle Pumps

- Move ankles up and down as far as possible in each direction.
- To prevent back strain, perform this exercise while lying flat.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Quad Sets

- Lie flat on back with one leg straight. Tighten quadriceps muscles (muscles on front of thigh), pressing the back of knee into bed and hold as indicated. Repeat with other leg.
- Do not hold breath.
- Hold for 15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Gluteal Sets (Bottom Squeezes)

- Sit, lie or stand. Squeeze bottom together.
- Do not hold breath.
- Hold 10 – 15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### 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. If you can't breathe comfortably, then you are trying to tighten muscles too much.
- Hold 10–15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.

**Coach's 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.



### Heel Slides (Slide Heel Up and Down)

- Lie flat on back.
- Slide heel toward your bottom. Keep your opposite knee bent to support your back. Repeat with other leg.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### 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.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.





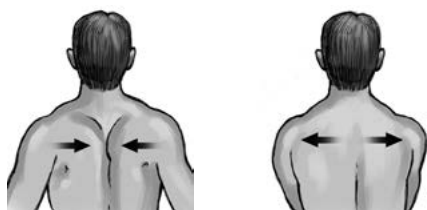
### Long Arc Quads (Knee Extensions)

- Sit in chair with knees bent (place buttocks at back of chair).
- Slowly extend one leg until knee is straight and hold.
- Return to starting position. Repeat exercise as indicated with other leg.
- Hold 10–15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Shoulder Circles

- Using a circular motion.
- Repeat 10 times forward and 10 times backward. (Each set equals 10 times forward and backward.)
- Complete 2 sessions per day.



### Scapular Retraction

- Pinch shoulder blades together. Do not shrug shoulders.
- Repeat 20 times. (Each set equals 20 reps.)
- Hold 5–10 seconds.
- Complete 2 sessions per day.

# CERVICAL SURGERY

## POSTOPERATIVE EXERCISES – WEEKS 3-6

### Seated Rows

- Start with elbows positioned at shoulder level.
- Pull arms back while squeezing shoulder blades together as if rowing a boat.
- Hold 10–15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Active Shoulder Flexion

- While standing or sitting, alternately raise one arm forward overhead with thumb up and elbow straight, being sure to alternate left and right arms.
- Lower arm slowly.
- Hold 5–10 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.
- Before progressing with hand weights, consult physician or therapist.



**Coach's Note:** Depending on your surgery, you may be limited to 90 degrees of shoulder flexion. In this case, do not lift your arms above shoulder level for any exercise or activity.

### Active Shoulder Abduction

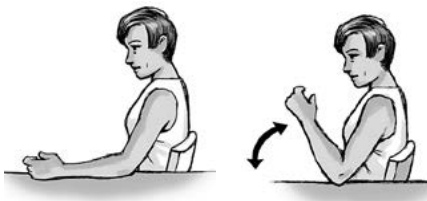
- Place arm directly to side. Leading with thumb raised, straighten arm overhead.
- Hold 5 – 10 seconds.
- Lower arm slowly.
- Repeat with other arm.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.
- Before progressing with hand weights, consult physician or therapist.





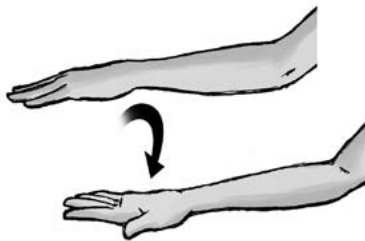
### Corner Stretch

- Stand in corner of room with both arms out to side and one leg forward, gently shifting weight forward toward corner.
- Stretch is felt across front of chest.
- Hold 10 seconds.
- Repeat 5 times. (Each set equals 5 reps.)
- Complete 2 sessions per day.



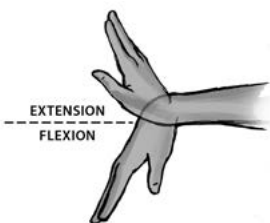
### Elbow Flexion/Extension

- While seated with your elbow supported, bend, then straighten your elbow (thumbs up).
- Or, lie on your back and place a pillow under your arm.
- Repeat 15 times. (Each set equals 15 reps.)
- Complete 2 sessions per day.



### Forearm Supination and Pronation

- Rest your arm on a table with a slight bend in your arm.
- Rotate your hand to face palm up. Return your palm to face down.
- Hold 5 seconds.
- Repeat 15 times. (Each set equals 15 reps.)
- Complete 2 sessions per day.



### Wrist Flexion/Extension

- Bend your wrist up and then down.
- Repeat 15 times. (Each set equals 15 reps.)
- Complete 2 sessions per day.

**Elbow Extension with Wrist Flexion Stretch**

- While seated, extend arm.
- With your opposite hand, gently push down to flex the wrist.
- Hold 5 seconds.
- Repeat 15 times. (Each set equals 15 reps.)
- Complete 2 sessions per day.
- Repeat with opposite arm

**Elbow Extension with Wrist Extension Stretch**

- While seated, extend arm.
- With your opposite hand, gently pull fingers towards you as you flex your wrist.
- Hold 5 seconds.
- Repeat 15 times. (Each set equals 15 reps.)
- Complete 2 sessions per day.
- Repeat with opposite arm



# LUMBAR SURGERY

## POSTOPERATIVE EXERCISES – WEEKS 1-2

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

- Move ankles up and down as far as possible in each direction.
- To prevent back strain, perform this exercise while lying flat.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Quad Sets

- Lie flat on back with one leg straight. Tighten quadriceps muscles (muscles on front of thigh), pressing back of knee into bed and hold as indicated. Repeat with other leg.
- Do not hold breath.
- Hold 15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Gluteal Sets (Bottom Squeezes)

- Sit, lie or stand. Squeeze bottom together.
- Do not hold breath.
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- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.





### 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. If you can't breathe comfortably, then you are trying to tighten muscles too much.
- Hold 10–15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.

**Coach's 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.



### Heel Slides (Slide Heel Up and Down)

- Lie flat on back.
- Slide heel toward your bottom. Keep your opposite knee bent to support your back. Repeat with other leg.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### 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.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Long Arc Quads (Knee Extensions)

- Sit in chair with knees bent (place buttocks at back of chair).
- Slowly extend one leg until knee is straight and hold.
- Return to starting position. Repeat exercise as indicated with other leg.
- Hold 10–15 seconds.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 2 sessions per day.



### Hip Abduction and Adduction

- Lie on your back.
- Bend one leg at the knee.
- Slowly slide the straight leg out to the side and then back to the center.
- Always keep toes pointed toward the ceiling.
- Repeat steps with other leg.
- Do not hold your breath.
- Repeat 20 times with each leg.
- Complete 2 sessions per day.



### Walking

Walk as far as possible, taking rest breaks as needed. Increase distance each day.



# LUMBAR SURGERY

## POSTOPERATIVE EXERCISES – WEEKS 3-6



### Heel Raises

- Stand next to a counter or stationary object and slowly rise up on your toes.
- Maintain this position for 5–10 seconds, then lower to a standing position.
- To help with balance, you may hold onto the object for support.
- Repeat 20 times. (Each set equals 20 reps.)
- Complete 1–2 sessions each day.



### Prone with Single Leg Lifts

- Lie on your abdomen with a pillow placed under your abdomen and thighs.
- Tighten your abdominal muscles (you should feel your abdomen pull away from the pillow).
- Bend one leg at the knee and then slowly lower it to the bed.
- Repeat this activity with the other leg.
- Remember to keep your abdominal muscles tight while lifting your lower leg.
- Do not hold your breath or arch your back.
- Repeat 20 times with each leg. Rest in between as needed.



### Calf Stretch

- Stand with one leg straight and one foot back.
- Keep your heel on the floor.
- Gently lean into the wall keeping your back straight until a stretch is felt in the calf.
- Do not bounce.
- Hold 20–30 seconds.
- Repeat 3 times per leg.

# FOR THE REST OF YOUR LIFE

You should strive to have a regular exercise program to maintain the fitness and the health of the muscles around your spine. With both your surgeon and primary care physicians' permission, you should be on a regular exercise program three to four times per week, each session lasting 20–30 minutes.

## General Recommendations

- Although the risks are very low for postoperative infections, it is important to realize that the risk remains. Any implanted hardware could possibly attract the bacteria from an infection located in another part of your body. If you develop a fever of more than 101.0 degrees or sustain an injury such as a deep cut or puncture wound, you should clean it as best you can, put a sterile dressing or an adhesive bandage on it and notify your doctor. The closer the injury is to your surgical site, the greater the concern. Occasionally, antibiotics may be needed. Superficial scratches may be treated with topical antibiotic ointment. Notify your doctor if the area is painful or red.
- Please check with your physician if you are planning to travel shortly after your surgery. When traveling, to avoid blood clots stop and change positions hourly.

## Exercise Recommendations

Choose low-impact activities when recommended by your surgeon. Examples include:

- Regular 1- to 3-mile walks outside or on a treadmill
- Stationary bike
- Aquatic exercises when cleared by your surgeon
- Regular exercise at a fitness center
- Low-impact sports such as golf, bowling, walking, gardening, dancing and swimming. Consult with your surgeon or physical therapist about returning to specific sports activities.
- Avoid engaging in high-impact activities or contact sports that require a lot of starts, stops, turns or twisting motions.

Consult your  
physician  
before starting  
any exercise  
program.

# UNDERSTANDING THE SPINE AND TYPES OF SURGERY

We are glad you have chosen the Sentara Spine Center for your spine surgery. In this section, we'd like to familiarize you with the anatomy of the spine and the types of spine surgery.

## Anatomy of the Spine

The spine is divided into five regions.

1. Cervical
2. Thoracic
3. Lumbar
4. Sacral
5. Coccygeal

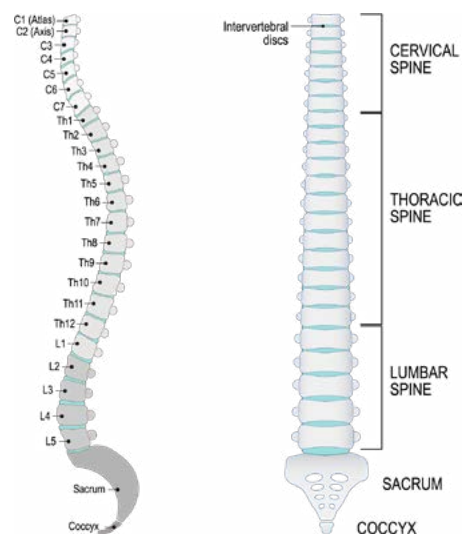
Your cervical area has seven vertebrae, the thoracic has 12 vertebrae, the lumbar has five vertebrae and the sacrum has five levels. The levels of the sacrum are all fused.

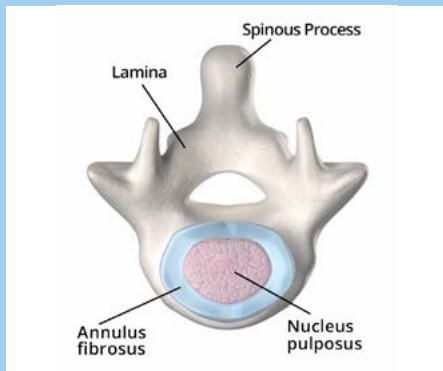
The very lowest portion of your spine is the coccygeal area. Your coccyx has four bones that are fused together.

## Disc and Vertebrae

The spine is a semi-rigid structure that consists of 33 block-like bones called vertebrae. The spine protects your spinal cord and helps provide you an upright posture.

Vertebrae are the bony building blocks of the spine. Each vertebra has a solid part in front, the vertebral body and a hole in the back. When lined up, these rear holes form a spinal canal, which serves as a protective passageway for the bundle of nerves that extends from the head to the pelvis. The vertebral body is the principal weight-bearing part of your spine. Individual vertebra become increasingly larger from the cervical area down to the lumbar region.





The intervertebral discs are located between the vertebral bodies and are made up of fibrous cartilage and act as a shock absorber of the spine. The outer portion of your disc is called the annulus fibrosus, which is a very tough fibrous structure.

The inner part is the nucleus pulposus. The nucleus is what often causes trouble. It can bulge or herniate out and put pressure on your spinal cord or the spinal nerves.

## Spine Pain

Spine pain has many causes. You may have pressure on the nerve roots or spinal canal. Spine pain is caused by:

- Herniated, bulging or slipped discs
- Degenerative disc disease
- Bone spurs
- Calcium deposits
- Tumor
- Arthritis
- Infection
- Spinal stenosis
- Spondylolisthesis
- Fractures

## Spine Surgery

When other treatments have been tried or a major injury occurs, spine surgery may be needed. Spine surgery can be performed from the front (anterior), from the back (posterior) or the side (lateral).

Common surgeries include:

- Laminectomy
- Discectomy
- Fusion
- Artificial disc replacement

The surgery your surgeon suggests depends on your presenting symptoms and imaging.

### **Laminectomy**

A laminectomy is the complete removal of the arch of the vertebra, the lamina covering the spinal cord, to relieve pressure on the spinal cord.

### **Discectomy**

A discectomy is the removal of the vertebral disc to relieve pressure from the spinal nerve or spinal cord.

### **Spinal Fusion**

A spinal fusion creates a bridge between two vertebrae and provides spinal stability. A bone graft is placed within the space between two vertebrae. Screws and rods are placed to create stability between the two vertebrae.

### **Artificial Disc Replacement**

This is the complete removal of the disc that is replaced by a mechanical device that simulates spine function. Typically done in younger patients, it can help maintain mobility.

# GLOSSARY FOR SPINE SURGERY

**Arthritis (Spinal)**

Inflammation of facet joints in the spine or sacroiliac joints between the spine and pelvis

**Bone Spur**

Abnormal growth of bone, usually present in degenerative arthritis or degenerative disk disease.

**Bulging Disc**

A bulging disc occurs when the nucleus shifts to press against the disc's outer ring, causing the disc to flatten and protrude into the spinal canal.

**Degenerative Disc Disease**

A condition when damaged discs cause pain.

**Facet Joint**

The facet joints are the connections between the bones of the spine. The nerve roots pass through the foramen, which are openings between the vertebrae. These joints also allow the spine to bend and twist, and they keep the back from slipping too far forward or twisting without limits.

**Herniated Disc**

Abnormal protrusion of soft disc material that may impinge on nerve roots. Also referred to as a ruptured or protruding disc.

**Lamina**

Paired bones that form an arch off the vertebral body that protects the spinal cord.

**Spinal Stenosis**

Stenosis means narrowing. This is a narrowing of the spaces within your spine, which can put pressure on the nerve roots and cause pain.

**Spondylolisthesis**

A spinal condition that causes lower back pain. It occurs when one of your vertebrae, the bones of your spine, slips out of place onto the vertebra below it.



# INDEX

Activities of Daily Living - 45

Stairs - 54

Getting in and out of bed - 46

Getting in and out of the car - 51-52

Alcohol and Drug Consumption (see Recreational Substances) - 8

Anesthesia - 20

Blood Clot Prevention - 38

Blood Thinners - 37

Braces and Collars - 43-44

Breathing Exercises - 28-29

Comfort Tips - 35

Constipation - 35

Dental - 22

Fall Prevention - 35, 40

Incision - 37

Medications

Medication List - 18

Medications to stop - 21

Movement Restrictions (no bending, lifting or twisting - BLT - 41-42

Nail Polish - 23

Nutrition - 9

Pain Management/Pain Scale - 26-27

Pain Descriptions - 26

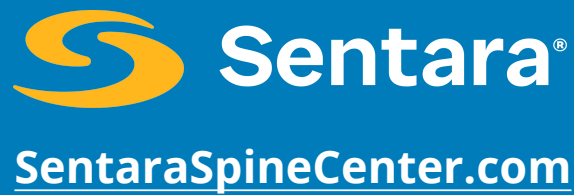
Recreational substances - 8

Smoking - 8

What to bring to the hospital - 22-23

# NOTES





Atención: si habla español, tiene a su disposición servicios lingüísticos gratuitos. Llame al 844-809-6648.

주의: 한국어를 사용하시는 경우, 언어 지원 서비스를 무료로 이용하실 수 있습니다. 844-809-6648 번으로 전화해 주십시오.

注意: 如果您讲中文普通话, 则将为您提供免费的语言辅助服务。请致电 844-809-6648。

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