Welcome

Thank you for choosing Inova for your spine surgery.

Each year, more than 500,000 people in America undergo spine surgery. Primary candidates for this surgery include patients with chronic pain who have not responded to other conservative therapies and individuals who suffer from acute pain caused by progressive neurological damage that interferes with walking, exercise, leisure, recreation or work. The goal of spine surgery is to relieve pain, restore independence and return people to their daily activities.

Inova’s Hospitals provide comprehensive care through an interdisciplinary spine care team of skilled professionals. Our team, including orthopedic spine surgeons, spinal neurosurgeons, anesthesiologists, physiatrists, specially trained nurses, physical and occupational therapists, pharmacists, dieticians and case managers, works together to develop and implement individual treatment plans for each patient. Our commitment is to provide excellent care and involve you in your treatment through each step of the program.

This guidebook will provide you with information about what you can expect every step of the way – what you need to know before surgery, and how to care for yourself after surgery. Remember, this is just a guide; your spine care team may add to or change any of the recommendations contained here. Always ask questions if you are unsure of any information.

If you have any questions or concerns regarding your care while at the hospital or after you are discharged, our Inova Spine Program is also here to assist you. The Inova Spine Program’s Nurse Navigators can be reached at any time with your questions. Please refer to Important Phone Numbers to find the navigator at your facility.

Once again, thank you for your confidence in our team and for allowing Inova to assist you with your healthcare needs.
Preparing For Surgery

What you need to know before surgery

Complete the Back In Action online education video and quiz.
The Spine Pre-op Education is designed to provide you with information that will make your experience more successful. Go to www.inovaspine.org to complete the education and quiz.

Medications to avoid
10 to 14 days prior to surgery, all “blood-thinning” medications should be stopped. Please speak with your surgeon if you are taking any of the following medications: Warfarin, Plavix, Aspirin, Lovenox, Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), Pletal, Trental, Vitamin E, Persantine, Ginkgo Biloba, Herbal Stimulants, Aggrenox, Multi-vitamin, etc. Stopping these medications may require coordination of your care with your primary care physician and other specialists whom you may be seeing.

Spine Care Navigator
Our spine navigators are here to assist and guide you with planning for your surgery. Please contact your Spine Navigator with any questions you may have about your upcoming surgery.

Home Modifications
It is important that you consider the following examples to modify your home environment:

• Place all daily bathroom and kitchen items at waist level and within easy access.
• Remove all throw rugs, electrical cords or wires that may cause you to trip or fall.
• Rearrange furniture to create more open and wider walking pathways in hallways and rooms.
• Place non-slip mat in the bottom of the shower/tub.
• Check your stair rails to ensure they are secured and safe for use.

Medications, X-rays, MRIs
Make sure that you provide a list of all of your current medications with dosages and any imaging studies (X-rays, MRI, CT, etc.) to your surgeon well ahead of time. This will provide the surgeon with necessary information to make better plans for your surgery.

Plan Ahead for Home
It is important for you to plan ahead for your family and household needs during your hospitalization and for a few days after you get home. Things to consider are child care, pet care, food arrangements, banking, transportation needs, house work, and grocery shopping.

Stop Smoking
Smoking, either before or after surgery, can be extremely detrimental to your health. Research has shown that smoking significantly increases a patient’s risk for post-operative complications, such as pneumonia and other pulmonary complications, infections in the surgical incision, heart attack, and stroke. The effects of these complications can be extremely serious and often fatal. Given this, we encourage patients to abstain from smoking as long as possible, both before and after surgery. The earlier you quit, the greater your chances of avoiding surgery-related complications. Inova offers services for those seeking assistance with smoking cessation. For more information on these programs, refer to Resources.

Registration
A member of the financial coordination team will:

• Contact you by phone to complete the registration process and confirm your contact and insurance information.
• Contact your insurance carrier to verify benefits.
• Discuss and make arrangements with you for any financial responsibilities not covered by your insurance.

Important Phone Numbers
Inova Alexandria Hospital ........................................ 703.504.3000
Inova Fairfax Medical Campus ....................................... 703.776.4001
Inova Fair Oaks Hospital ............................................. 703.391.3600
Inova Loudoun Hospital ................................................. 703.858.6000
Inova Mount Vernon Hospital ..................................... 703.664.7000
Spine Navigator for all hospitals please call ..................... 703.776.4700

Resources
Inova Spine Institute
www.inovaspine.org
703.776.4700
Inova Physical Therapy Centers
www.inova.org/physicaltherapy
Inova VNA home Health
www.inova.org/homehealth
571.432.3100
Smoking Cessation
www.inovahealthsource.com

Inova Mount Vernon Hospital
www.inova.org
703.664.7000

Academy of Nutrition and Dietetics
www.eatright.org

Inova Physical Therapy Centers
www.inova.org/physicaltherapy

Inova Spine Institute
www.inovaspine.org
703.776.4700

Inova Physical Therapy Centers
www.inova.org/physicaltherapy

Inova VNA home Health
www.inova.org/homehealth
571.432.3100

Academy of Nutrition and Dietetics
www.eatright.org

Smoking Cessation
www.inovahealthsource.com
7-10 Days Prior to Surgery
- Be sure to complete your pre-operative interview.
- You will likely need to complete blood tests, an EKG, and a chest X-ray if ordered by your doctor.
- You will need to complete your MRSA screening 7-10 days prior to surgery to allow adequate time for your surgeon to receive the results and treat accordingly.
- Your date and time for the surgery will be confirmed at the time of your pre-surgical interview.
- You will need to provide a list of all medications and dosages along with a list of allergies.
- Provide an accurate medical history and contact information of all physicians who are involved in your care for any other medical reason.
- Do not smoke at least 24 hours prior to surgery.
- Consider eating healthier portions of foods with higher fiber content and low fat. Consume plenty of water. Avoid caffeinated beverages and alcohol.

Night Before Surgery
- Pack your overnight personal items (including items listed below that must be brought to the hospital).
- Shower with the antibacterial soap (CHG). Your CHG showers should start 2 days prior to surgery.
- Do not shave or wax body hair at least 48 hours prior to surgery. You may shave facial hair only, but prior to your showers.
- Do not apply creams, deodorants, lotions, powders, or perfumes.
- Do not eat or drink anything after midnight on the night before your surgery as recommended by your surgeon or anesthesiologist (including gum or mints). You should avoid caffeinated beverages and alcohol.
- Do not smoke within 24 hours of surgery.

Day of Surgery
- Shower again with your antibacterial soap.
- Leave jewelry, money, and valuables at home.
- Bring your driver’s license or photo ID.
- Bring your health insurance card and your insurance co-payment (if applicable).
- Bring your advanced directive, living will, or power of attorney (if applicable).
- Bring a current medication and allergy list.
- Bring your CPAP (Continuous Passive Airway Pressure) machine (if applicable).
- Bring films or DVD of X-rays and/or MRI (if your MD does not have copies already).
- Bring any pre-fitted braces for your neck or back.
- Bring containers for eyeglasses, contact lenses, dentures, and hearing aids.
- Clothing to bring: Pants-loose-fitting or elastic waist; Shirt-large/wide collar or V-neck; and shoes.
- Remove all nail polish, jewelry, make-up, and body piercings.

Infection Prevention
It is very important to clean your skin at home with a special germ-killing cleanser before your surgery day. Please clean your skin with an antimicrobial/antibacterial soap called 4% chlorhexidine gluconate, or CHG. CHG antimicrobial soap kills most germs on your skin. It reduces your risk of infection at your body’s surgery site.

Using CHG at Home
- Use the CHG solution in the shower.
- Use the CHG daily for the 2 days just prior to your surgery AND on the morning of your surgery, for a total of 3 showers at home.

Buying CHG
- You can buy CHG antimicrobial solution (liquid) at your pharmacy. You do not need a prescription. Ask for the CHG antimicrobial solution at the pharmacy counter. Some brand names for CHG are Hibiclens, Hibistat, Exidine, or Hex-A-Clen.
- You will need 2-4 ounces of the 4% CHG solution for each shower. For all 3 showers, you will need a maximum of 12 ounces of the solution.

Cautions for using CFG
- If redness or swelling occurs from using CHG, stop using it and contact your surgeon.
- Do not put CHG above your neck or on your genitals (private areas).
- Use CHG solution in the shower, not the bathtub. If it is not possible for you to shower, contact your surgeon’s office for further instructions.

CHG Cleaning Instructions
1. Buy 4% CHG solution from your pharmacy.
2. For shower #1 taken 2 days before your surgery, wash yourself in the shower with your regular soap and shampoo first. Completely rinse the soap and shampoo off of your hair and body.
3. With shower water off, apply the CHG solution with a clean, wet cloth or hands. Gently bathe your entire body from the neck down. Include your groin area but not your genitals (private parts).
4. Clean the spot where your incision will be for about 3 minutes. If you cannot reach this spot, have someone help you with the bathing. Make sure they have thoroughly cleaned their hands before helping you.
5. Once you have finished putting the CHG on your skin, turn the water on and rinse the CHG solution off your body.
6. Do not wash with regular soap after using the CHG solution.
7. For showers 2 and 3, repeat steps 3-5.
Recovery in the Hospital

For your safety and proper recovery immediately after surgery, you may have:

- Fluids administered intravenously (IV fluids) to keep you well hydrated if you are unable to eat or drink yet.
- The IV can also be used to administer pain medications and other medications as needed.
- Urinary catheter that will drain your bladder (This will usually be kept in the first night you are in the hospital and removed the following morning).
- Drains (tubes) to remove fluid from the surgical site to ensure proper healing.
- Compression stockings and devices on your legs to prevent swelling in your legs and reduce the chance of getting blood clots.
- An incentive spirometer used to encourage deep breathing every hour.

Day of Surgery

- After your shower dress in clean clothes to wear to the hospital.
- When you arrive at the hospital on surgery day, the nurse will ask you if you completed the 3 CHG showers at home as instructed.

Hospital Stay

Having followed our recommendations to prepare for your surgery, you are now well on your way to take the first step towards a more functional lifestyle. Our care team will assist you through the entire process while ensuring that your family and caregivers are well informed of your progress.

Pre-Operative Procedures

- After you have registered, an identification (ID) bracelet will be placed on your wrist. To help keep you safe throughout your hospital stay with us, you can expect each staff member who interacts with you to first check your ID bracelet to verify your name and date of birth before they administer any treatment or medication.
- A surgical care team will prepare you for surgery in the pre-op area. Here you will be put in a gown, hat, and slippers. We will start intravenous (IV) fluids. You will see your surgeon and anesthesiologist, who will answer any questions you may have for them.
- You will be asked to participate in identifying your surgical site. This is done so that you can help us ensure that we are performing the correct surgery, at the right location of your body.
- Your care team will escort you to the operating room.

Post-Operative Procedures

- After your surgery is completed, you will be in the Post Anesthesia care Unit (PACU) for about 1-2 hours. The care team here will awaken you from anesthesia and provide pain medications to help you manage your pain.
- You can expect to be connected to several pieces of equipment such as an IV, oxygen mask, heart monitor, urinary catheter, and pulse oximeter (to measure your blood oxygen level). Please note that this is all normal and required so that the care team can safely monitor your progress after surgery.
- Once you are awake and recovered from anesthesia, you will be transferred to an appropriate spine care area if you are remaining in the hospital. One of the care team staff members will inform your family or caregiver about your new bed assignment in the spine care area. If you are having a same-day surgery, you will be discharged from the PACU after you have recovered from anesthesia and met your discharge goals/requirements.

Activity Expectations

After surgery, you will be expected to get out of bed the day of surgery with a member of your care team. At a minimum, you should stand and take a few steps. You may ambulate as tolerated.

Our goal is at least 50 feet. Early ambulation after surgery will help to reduce complications such as pneumonia and deep vein thrombosis (blood clots) in your legs and reduce your length of stay in the hospital.

Diet

After surgery, your first meals will be liquids or light while you are recovering from anesthesia. You will be able to advance your diet as tolerated throughout your stay.

We will let you rest as much as possible although your sleep may be interrupted to allow us to:

- Check your vital signs regularly.
- Monitor your fluids to ensure you are well hydrated.
- Check your pain status and administer medications.
- Perform early morning lab work.

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Comfort Function Goal

Your physicians, nurses, pharmacists, and other members of your healthcare team will work with you to develop an individualized plan to provide you safe and effective pain management. In order to do this, you will be asked to tell us about your health history and your pain history.

As a partner in this plan, we ask that you:

- Give a description of your pain (what it feels like), the location of your pain, does the pain persist all the time or does it come and go, and what triggers and relieves your pain.
- Rate your pain on a scale of zero (0) to ten (10) with:
  - 0 = no pain
  - 1 to 3 = mild pain
  - 4 to 6 = moderate pain
  - 7 to 10 = severe pain-worst pain that you can imagine
- Identify your Comfort Function Goal

The Comfort Function Goal is the pain level (on the zero to ten pain rating scale) that can exist without interfering with the function and quality of life; that is, activities that you need or wish to do. The Comfort Function Goal is NOT the highest level of pain that you can tolerate, but should be the pain level that may be noticeable and expected with the type of surgery performed. The Comfort Function Goal needs to be realistic, as zero pain is not always possible. The ultimate goal is to achieve your Comfort Function Goal or a pain level below that goal in order to ensure you are able to do those activities needed for your recovery.

Reporting a pain level above the Comfort Function Goal will result in consideration of additional interventions. Your healthcare team will be asking you your Comfort Function Goal and communicating with you about your goal throughout your hospital stay.

Remember: Your Comfort Function Goal may change throughout your hospital stay.

- Inform your healthcare team of any medications you take, including any over-the-counter medications and herbal supplements.
- Tell your healthcare team any pain relief techniques you have used in the past that have worked well for you such as use of heat, cold, massage or elevating parts of your body.

It is essential for you to discuss your pain management plan with your health care team frequently in order to evaluate the effectiveness of the plan and to make adjustments as needed to provide both safe and effective pain control. Untreated pain can interfere with your daily activities such as taking deep breaths, eating your meals, sleeping, or getting out of bed and walking.

Your healthcare providers at the Inova are committed to providing you with safe and effective pain management. Effective pain management is the key to increasing your well-being and improving recovery.
Pain Rating Scales

Regardless of the type of surgical procedure, the ultimate goal is to provide maximal benefit to you by decreasing your pain and improving your ability to function as normally as possible in daily life.

Planning For Discharge

You are the most important member of the care team. You will be expected to participate actively in your own healing, so that you can achieve the level of recovery required for discharge from the hospital.

Your care team will include your surgeon, nurse, physical & occupational therapists, case managers, clinical technicians, and your spine navigator.

Discharge after surgery is a team guided decision that will depend upon:

- Your medical recovery after surgery
- Your ability to move about and perform basic self-care activities safely
- Your ability to manage activities of daily living at home

The type of surgical procedure and your recovery will determine your length of stay in the hospital. Your stay can vary from discharge on the day of surgery for minimally invasive procedures up to a couple of days for more complex surgical procedures.

Depending upon the type of surgical procedure you undergo and your recovery from it, your stay in the hospital may require active participation in a physical rehabilitation program consisting of physical and occupational therapy.

The goals of Physical and Occupational Therapy will be to teach you how to:

- Get in and out of bed safely.
- Move from sitting to standing and then to the bedside chair safely.
- Safely walk.
- Climb stairs.
- Do your post-surgery exercises.
- Dress while you heal from surgery.
- Bathe/Toilet.
- Use the restroom.
- Perform hygiene at the sink.
- Get in and out of a vehicle.
- Do other home or work related activities that are important to you.

A nurse, therapist, or clinical technician will periodically assist you with getting out of bed and into a bedside chair for brief periods of time. You will also be expected to walk with the assistance of a nurse or therapist. These activities will occur soon after surgery and when you are medically stable.

Back At Home

Expectations

Returning home does not mean that you are ready to resume normal activities right away. Upon your discharge you should expect to walk at home, be able to get in and out of bed and perform basic self-care and hygiene activities independently.

Activities to Avoid

- No driving. You will receive instructions on when you may resume driving from your surgeon.
- No smoking. It decreases circulation and slows down healing of bone fusions (if performed).
- No drinking alcohol while on narcotic pain medication or muscle relaxers.
- Avoid sitting or standing for more than one hour at a time. Change your positions often.
- Avoid excessive stair climbing.
- No soft or low chairs, sofas, rockers, or waterbeds, as they are hard to get out of.
- No baths, hot tubs or swimming pools, until your surgeon agrees to it.
- Avoid sexual activity. You will need to consult your surgeon for further directions.
- Avoid lifting anything below waist level or above shoulder level.
- Do not lift any objects more than 5 pounds (e.g. one half gallon jug of milk).

Activities Allowed and Encouraged

- Do as much as you can for yourself safely. Be sure to follow the spine precautions carefully.
- Walk at home frequently (at least 3-4 times) during the day and outdoors if possible. Use your brace and/or walking aid if recommended by the surgeon or therapist.
- Perform the exercises as recommended by your therapist daily.
- Get frequent periods of rest throughout the day so you do not over fatigue your muscles.

Caring for your Incision

- Initially, keep your incision dry. When allowed to shower, be sure to dry your incision site well after showering by dabbing a clean, dry towel over it.
- Avoid applying any creams, gels, or lotions to your incision.
- Follow your surgeon’s specific dressing change instructions as covered in your discharge paperwork.
- Do NOT attempt to remove the steri-strips (small pieces of tape across the incision), sutures, or staples.
Managing Your Pain At Home

A certain amount of pain or discomfort can be expected until the inflammation and nerve sensitivity has subsided. Gradually use less pain medication by increasing the amount of time between taking pills. Try to use alternative methods of reducing pain or discomfort such as ice packs, heating pads, repositioning as recommended by your surgeon. Do not place ice or heat packs directly against your incision. Use a towel or sheet to cover the ice or heat pack.

Maintain a Well Balanced Diet

A nutritious and well balanced diet will aid the healing process. Constipation is another common problem that can occur as a side effect of pain medications. To avoid these problems, your daily diet should include food from all basic food groups: dairy products, meats, whole grains, fresh vegetables and fruits. Consume plenty of fluids but avoid alcohol. You may have sports drinks or fruit juices in moderation.

Constipation

Constipation is a common problem following surgery due to a combination of pain medication and poor mobility. Constipation means you have bowel movements fewer than three times per week, or strain to pass hard, dry stool. Your physician should give you a prescription for stool softeners.

Actions to help relieve constipation:
- Increase fiber intake (whole grains, fruits, vegetables).
- Increase water intake.
- Frequent mobility (walking).
- Warm compresses across the abdomen can help soothe abdominal pain.

Please speak with your physician prior to taking or using a laxative to avoid diarrhea or dehydration.

Over the counter items that may help as well:
- Coffee
- Miralax
- Prune juice (warm or cold)
- Milk of Magnesia
- Citrucel
- Smooth move tea
- Flax seed
- Fiber One products (cereal, bars, etc.)
- Metamucil

Wearing your Brace

Your physician will decide if you need a brace after surgery and how long you will need to wear it. You should wear one thin layer of clothing between your skin and your lumbar brace. Always be sure to put on your brace as soon as you are out of bed. If instructed to do so, you will need to take off your brace before you get back in bed. Do not wear your brace in the shower and unless instructed to do so by your physician.

Proper technique to wear your lumbar (low back, left) and cervical (neck, right) brace.

Braces are intended to support your neck or low back muscles after surgery. They are also intended to limit excessive movement after surgery. Your brace must fit snug but should never be so tight as to cause pain, tingling, or numbness anywhere. If you experience these symptoms after wearing your brace, please contact your physical and discontinue the use of the brace until you receive further advice.
Inova Physical Therapy Center Locations

ALEXANDRIA
Inova Physical Therapy Center
4700 King St., Ste. 200
Alexandria, VA 22302
Phone .......... 571.665.6560

ANNANDALE
Audy Moore Recreation Center
8100 Bradstock Rd.
Annandale, VA 22003
Phone .......... 571.423.2980
Fax ............. 703.323.3668

ASHBURN
Inova HealthPlex – Ashburn
22505 Landmark Ct., Ste. 215
Ashburn, VA 20148
Phone .......... 703.726.1616
Fax ............. 703.726.1613

BALLSTON
1005 N. Glebe Rd., Ste. 410
Arlington, VA 22201
Phone .......... 571.414.6930
Fax ............. 571.414.6941

CENTREVILLE
6201 Centreville Rd., Ste. 500
Centreville, VA 20121
Phone .......... 703.263.2095
Fax ............. 703.263.2098

CHANTILLY/DULLES SOUTH
24801 Pinebrook Rd., Ste. 200
Chantilly, VA 20152
Phone .......... 703.957.9963

FAIR OAKS
Inova Fair Oaks Hospital Campus
3620 Joseph Siewick Dr., Ste. 106
Fairfax, VA 22033
Phone .......... 703.391.2450
Fax ............. 703.391.3142

FRANCONIA-SPRINGFIELD
Inova HealthPlex – Franconia/Springfield
6355 Walker Ln., Ste. 404
Alexandria, VA 22310
Phone .......... 703.797.6900
Fax ............. 703.797.6905

HOSPITAL LOCATIONS
Inova Alexandria Hospital
Phone .......... 703.504.3535
Inova Fairfax Medical Campus
Phone .......... 703.776.6080
Inova Fair Oaks Hospital
Phone .......... 703.391.3642
Inova Loudoun Hospital
Phone .......... 703.858.6390
Inova Mount Vernon Hospital
Phone .......... 703.664.7190

MOUNT VERNON
8101 Hinson Farm Rd., Ste. 401
Alexandria, VA 22306
Phone .......... 703.664.7660
Fax ............. 703.664.7663

PROSPERITY/FAIRFAX
8501 Arlington Blvd., Ste. 200
Fairfax, VA 22031
Phone .......... 703.970.6490
Fax ............. 703.970.6491

SPRINGFIELD
8348 Traford Ln., Ste. 100
Springfield, VA 22152
Phone .......... 703.569.7335
Fax ............. 703.569.0665

TYSONS/VIENNA
8320 Old Courthouse Rd., Ste. 410
Vienna, VA 22182
Phone .......... 703.734.2889
Fax ............. 703.734.2139

WOODBRIDGE
14605 Potomac Branch Dr., Ste. 200
Woodbridge, VA 22191
Phone .......... 703.580.5160
Fax ............. 703.580.6880

FRANCONIA-SPRINGFIELD
Inova HealthPlex – Franconia/Springfield
6355 Walker Ln., Ste. 404
Alexandria, VA 22310
Phone .......... 703.797.6900
Fax ............. 703.797.6905

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8101 Hinson Farm Rd., Ste. 401
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Fax ............. 703.664.7663

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8501 Arlington Blvd., Ste. 200
Fairfax, VA 22031
Phone .......... 703.970.6490
Fax ............. 703.970.6491

SPRINGFIELD
8348 Traford Ln., Ste. 100
Springfield, VA 22152
Phone .......... 703.569.7335
Fax ............. 703.569.0665

UNITY HEALTHCARE

1501 M Street NW, Ste. 310
Washington, DC 20005
Phone .......... 202.226.7227
Fax ............. 202.226.7228

Urgent Post-Operative Symptoms

There are times when people can experience various signs or symptoms for the first week after they return home from surgery. It is important that you are aware of some of these signs and symptoms that may signal a more serious problem such as an infection or blood clots.

You MUST notify your surgeon or seek immediate medical care if you experience any of the following:

- Sudden shortness of breath or difficulty taking deep breaths
- Chest pain
- Increasing swelling, pain, or redness around the incision site
- Any change in color, odor, or amount of drainage from the incision
- Fever greater than 101.5 degrees three or more days after surgery
- Severe pain, swelling, heat, or tenderness in the calf, back of the knees, or groin area
- Severe stomach pain or nausea accompanied by vomiting
- Develop difficulty urinating or controlling bowel movements
- Increased swelling in ankles/feet
- Increased weakness in legs or arms
- Confusion

Important: Please refer to this page after your surgery.