



Preparing for your Spine Surgery

A guide from the Orthopaedic Spine Center to help patients understand spine surgery

Dear Patient,

On behalf of the spine physicians and the staff at Massachusetts General Hospital, thank you for entrusting us with your care. We are proud of the care we provide and pleased to offer this Guide so you and your family can fully understand what to expect when you come to Mass General for your spine surgery.

Preparing for any type of surgery is an undertaking for patients, as well as their families. Each patient assumes a very important role in planning his or her care. The information in this Guide describes the typical routines and practices associated with having and recovering from spine surgery.

This information and advice comes from the collective experience of Mass General health care providers, patients and families. In no way is it intended to substitute for the dialogue you will have with your surgeon and other involved health care providers. We hope that the information will help in your conversations with those involved in your care. We encourage you to carry this Guide and refer to it throughout your experience. You will also find that it is a convenient place to file other information pertaining to your care.

We are committed to providing you with an excellent experience. Please let us know if there is anything else we can do to help achieve this – we welcome your comments and suggestions.

Thank you again for choosing Mass General and for entrusting us with your care.

Orthopaedic Spine Center
Massachusetts General Hospital



MASSACHUSETTS
GENERAL HOSPITAL

ORTHOPAEDICS



HARVARD
MEDICAL SCHOOL

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Section 1: Our Spine Team

Your Health Care Team

It takes many people to make a hospital run smoothly. Your health care team will work together to make your hospital stay a positive, comfortable and successful experience. Feel free to ask questions and share concerns with any member of your team. The following are some staff who will provide your hospital care:

- **Attending Physician:** This is your surgeon who will be primarily responsible for your care during your hospital stay. He or she will work in conjunction with fellows, residents, physician assistants (PAs) and nurse practitioners (NPs) to provide comprehensive care.
 - [See our Spine Physicians](#)
- **Fellow:** Doctors who have completed residency training in orthopaedic surgery and are specializing in spine surgery.
 - [See our Spine Fellows](#)
- **Resident:** Doctors in their second through fifth year of specialized training in orthopaedic surgery.
- **Physician Assistant (PA):** Clinicians with specialized training who are part of the surgical team and care for you throughout your surgical journey. They may assist your surgeon in the Operating Room (OR), during your hospital stay and at your follow-up appointment.
 - [See our Spine PAs](#)
- **Nurse Practitioner (NP):** Nurses with advanced training who are part of your surgical team and care for you throughout your surgical journey. They may assist your surgeon in the Operating Room (OR), during your Hospital stay and at your follow-up visit.
 - [See our Spine NPs](#)
- **Anesthesiologist:** A medical doctor with advanced training in anesthesiology. They will administer your anesthesia during surgery.
- **Nurse Anesthetist (CRNA):** A nurse with advanced training who administers anesthetics under the supervision of an anesthesiologist.
- **Hospitalist:** A medical doctor who may see you during your hospital stay at the request of your surgeon.

Nursing Staff: A registered nurse (RN) will care for you throughout your hospital stay. Your nurse will make sure you receive the appropriate medications, medical treatments and tests ordered by your clinicians. Your nurse will also provide information and education to prepare you for discharge. A nurse is always available to answer questions or to discuss concerns you or your family may have. The name of the nurse caring for you on each shift will be available at the nurses' station or listed on a board in your room.

- **Patient Care Assistant (PCA):** The patient care assistant will assist your nurse in providing your daily care. They may help with bathing, taking vital signs or transporting you to and from tests.

Care Coordination Team

- **Case Manager:** This is a nurse who may assist with your discharge planning if you need services and/or equipment upon discharge. The case manager is familiar with resources in your community and may be able to help arrange home care, or if necessary, an appropriate extended-care facility. They can also help with any questions or problems about what services and/or equipment your medical insurance covers, as well as financial issues that may impact your recovery and/or access to services/equipment.
- **Social Worker:** A social worker is always available to discuss any concerns that you or your family may have related to your disease and the associated stress it may have on you and your significant others, including what concerns you may have about planning for discharge. They may also assist with arranging home care, placement in an extended-care facility, and/or facilitating equipment needed for home.

Rehabilitation Staff: These staff members have an important role in helping you recover from your spine surgery.

- **Physical Therapist (PT):** A PT may work with you during your hospital stay to get you moving around safely after your surgery. The PT will teach you how to safely get in and out of bed, walk with or without a device and walk up/down stairs (if needed). The PT will educate you regarding your surgeon's expectations for you upon leaving the hospital.
- **Occupational Therapist (OT):** The OT will address training you in how to perform activities of daily living including bathing, dressing, grooming and toileting so that you are as safe and independent as possible, either with the use of adaptive equipment or with compensatory strategies focusing on body mechanics. The OT will address training with functional mobility and transfers to assess for any necessary equipment or DME you might need at your toilet or tub/shower stall area prior to your discharge home.
- **Physical Therapy Assistant (PTA):** A PTA may assist your physical therapist in exercises and mobility training. The PTA carries out the goals set by the PT. While we try to maintain consistency in care having your same therapist, it may be necessary to have a different therapist or PTA follow you after your initial evaluation.

Other Hospital Staff: Housekeepers, dietary workers, radiology technicians, chaplains, pharmacists, transporters and other staff members are all part of your health care team.

Section 2: Consulting with Our Doctors

Appointments with the Mass General Spine Team

There are different ways to facilitate an appointment with the Spine Center:

- To make an appointment with one of our surgeons, please contact the Spine Center at 617-724-8636 and our staff will assist in making an appointment.
- If you have not had recent imaging (MRI or CT scan within the last one year), have not had any conservative care (physical therapy or injections), and have not had symptoms for longer than three months, you may be referred to our Access Clinic, where you will be appropriately worked up by one of our Advanced Practice Providers (APPs). The APP team is made up of Physician Assistants (PAs) and Nurse Practitioners (NPs).
- If you or your treating physician believes that you may require an urgent appointment, please have a referral placed as “urgent.” This service will provide a streamlined appointment to the appropriate clinician.

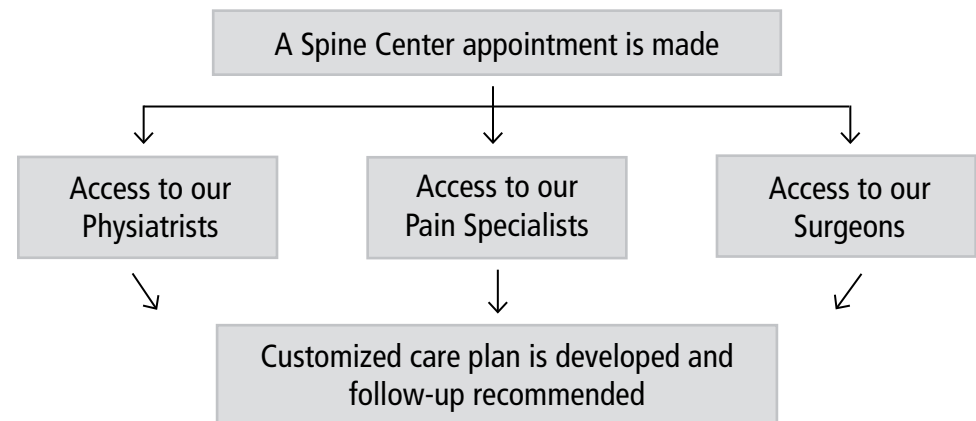
Once you have your appointment

Once you have an appointment with the Spine Center, you may have questions:

- Who will be my doctor?
- What is their specialty?
- Is surgery my only option?

The answers to these questions will vary depending upon what is right for you and your condition. Surgery is just one option - and it will be an appropriate treatment for some, but not for everyone. Your team at the Spine Center will work together to develop the best treatment plan for you.

To help you get a sense of what you will experience at the Spine Center, see the chart to the right. The majority of new patients that come to our Center may be evaluated by several different kinds of clinicians.



What to Expect during your Appointment

When you first check-in for your appointment, you may be asked to take new x-rays. Our x-ray clinic is located down the hall from the clinic rooms.

During your appointment, your clinician will go over your x-ray with you. You can also expect:

- A thorough evaluation and discussion with our specialists
- Review of your x-rays, MRIs and any additional medical records
- An in-depth conversation covering treatment options
- Customized treatment plan to get you back to an active lifestyle

Section 3: Spine Anatomy & Procedure Overview

As a patient considering spine surgery, you probably have many questions. This information will help you understand spine anatomy and potential sources of symptoms.

The spine is made up of a series of vertebra. There are seven cervical (neck), 12 thoracic (mid-back) and five lumbar (low back) vertebrae (Figure 1A & 1B). The vertebra is composed of a solid section called the body that sits anteriorly (in the front) and a ring of bone posteriorly (in the back).

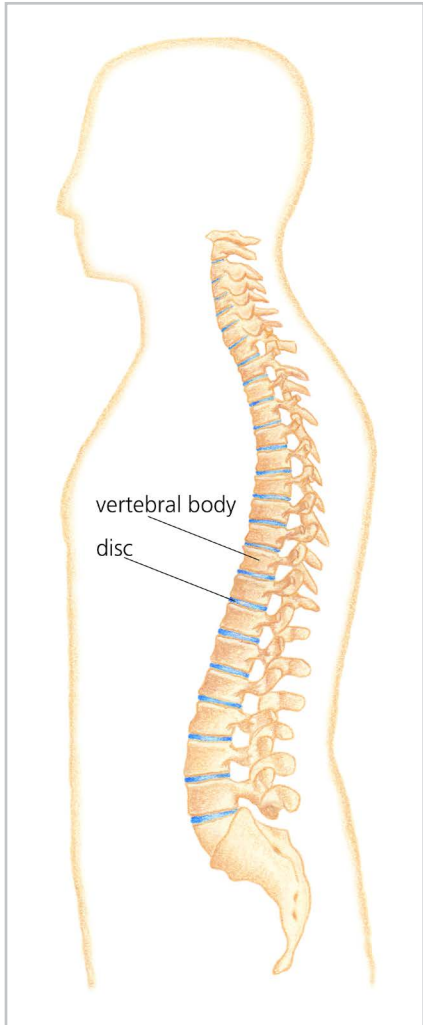


Figure 1A: Spine Vertebrae

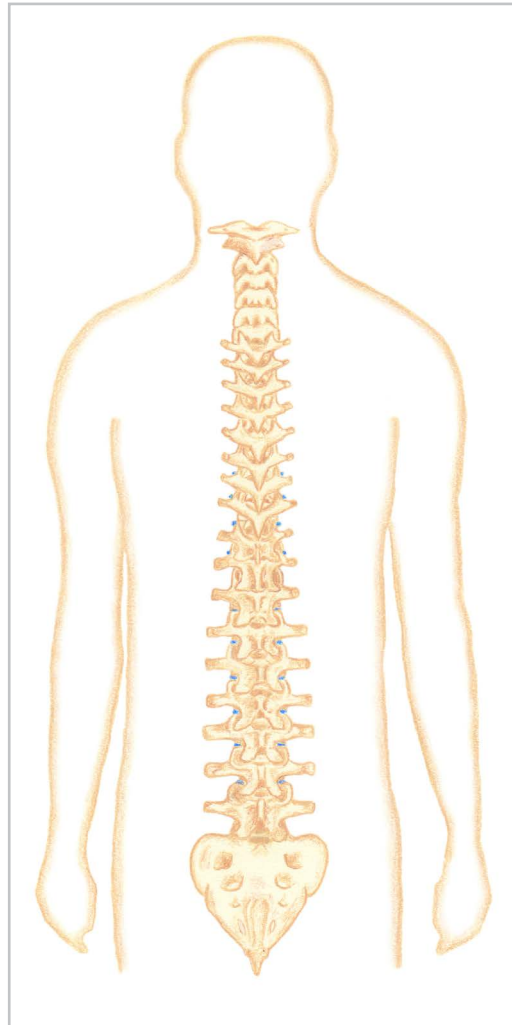


Figure 1B: Spine Vertebrae

This ring of bone creates a canal through which the spinal column and nerve roots run (Figure 2). The bony arch consists of the pedicle, paired transverse process, facet joints, lamina and spinous process.

Between each vertebra is a disc that serves as a shock absorber and provides height between two vertebrae. The disc has circular bands of cartilage called the annulus, which encases a gelatinous center called the nucleus (Figure 2).

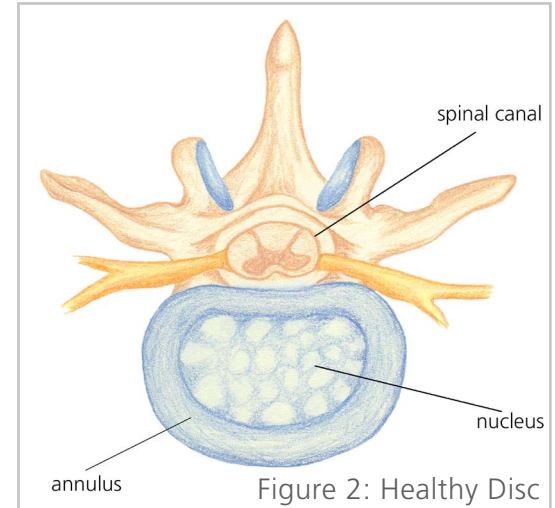


Figure 2: Healthy Disc

The discs between the vertebrae allow the back to flex or bend. With aging in addition to the wear and tear we put on our bodies, degenerative changes in the spine can occur. The discs between the vertebrae (bones) may degenerate and lose some of their water content. The annulus may weaken, allowing the disc to protrude or become herniated (Figure 3 & 4).

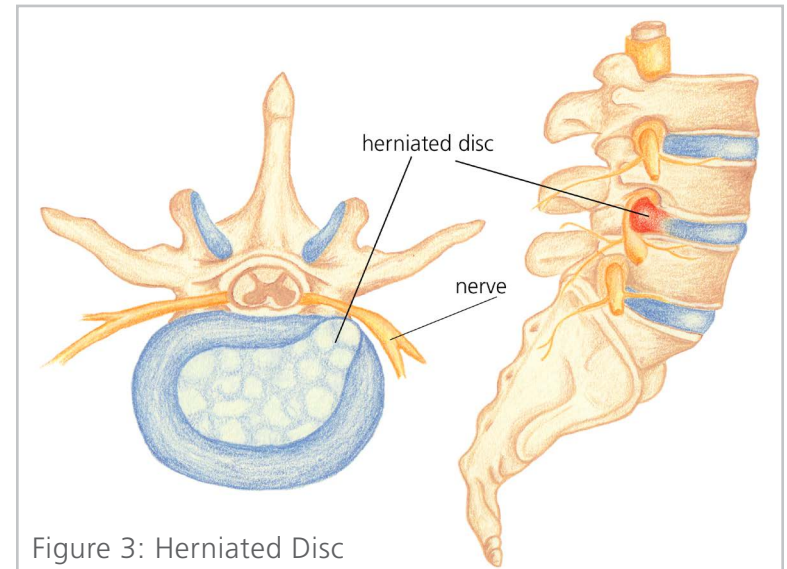
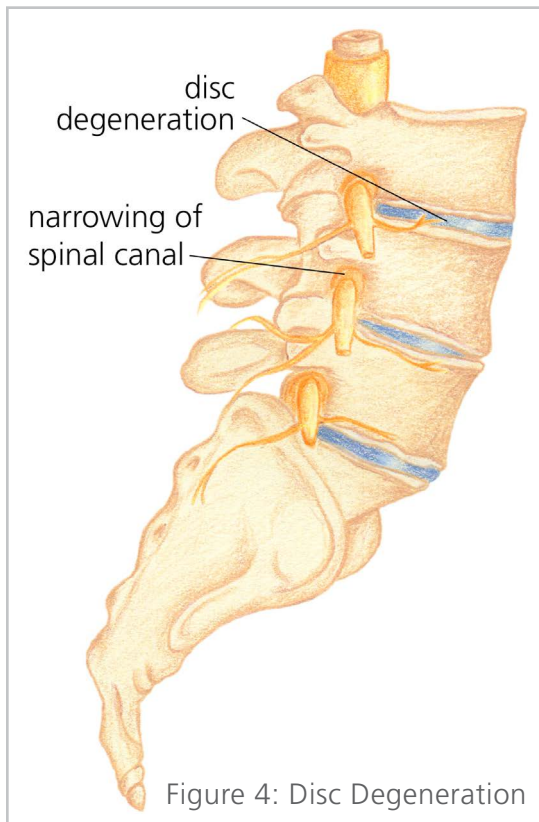


Figure 3: Herniated Disc



The facet joints may develop bony overgrowth due to arthritis. These changes can also lead to narrowing, or stenosis, of the spinal canal. Spinal stenosis can cause the nerves to be pinched as they pass through the canal and foramen (shown in Figure 5). The nerves become inflamed, which can cause pain in their corresponding body part. In the neck, patients may experience arm pain, and in the lower back patients may experience pain in the buttocks and/or legs. These changes can occur anywhere along the spine. We frequently see pathologies develop in the neck (cervical) or lower back (lumbar) spine.

Figure 4: Disc Degeneration

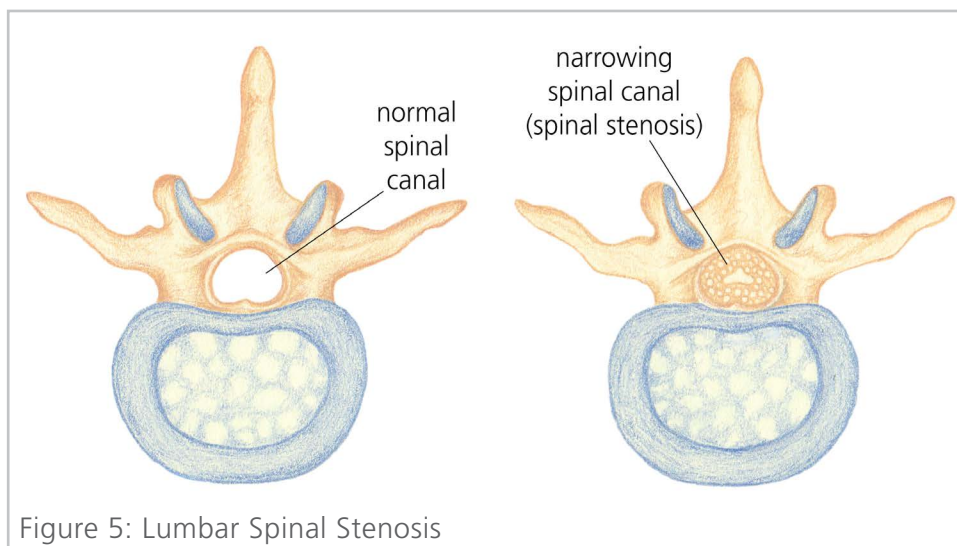


Figure 5: Lumbar Spinal Stenosis

Neck

When pressure is placed on a nerve in the neck, it may cause pain in the muscles between your neck and shoulder (trapezius muscles). The pain may shoot down the arm. The pain may also cause headaches in the back of the head. Other symptoms may include:

- Weakness in your arms or hands
- Difficulty using your fine motor skills, such as buttoning buttons or tying your shoes
- Tingling (a “pins-and-needles” sensation) or numbness in your arms or hands
- Burning pain in the shoulders, neck or arm
- Trouble with balance or walking

Over time, arthritis of the neck (cervical spondylosis) may result from bony spurs and problems with ligaments and discs. The spinal canal may narrow (stenosis) and compress the spinal cord and nerves to the arms.

Lower Back

Low back pain affects four out of five people. The most common symptom of a herniated disc is sciatica – a sharp, sometimes shooting, pain that extends from the buttocks down the back of your leg. It is caused by pressure on the spinal nerve. Other symptoms may include:

- Weakness in your legs or feet
- Tingling (a “pins-and-needles” sensation) or numbness in your legs or feet

Significant weakness in both legs where you are unable to walk, loss of sensation in your “saddle” region, and changes of bladder or bowel function (urinary incontinence/retention and/or bowel incontinence) could indicate a serious problem and you should seek immediate attention.

Degenerative changes may also lead to abnormal motion between the vertebrae (instability). Degenerative changes in the lower back can lead to forward or backward slippage of one vertebra on another, a condition called spondylolisthesis.

When conservative measures such as medications, physical therapy, or injections fail to relieve your symptoms, your physician may recommend surgery

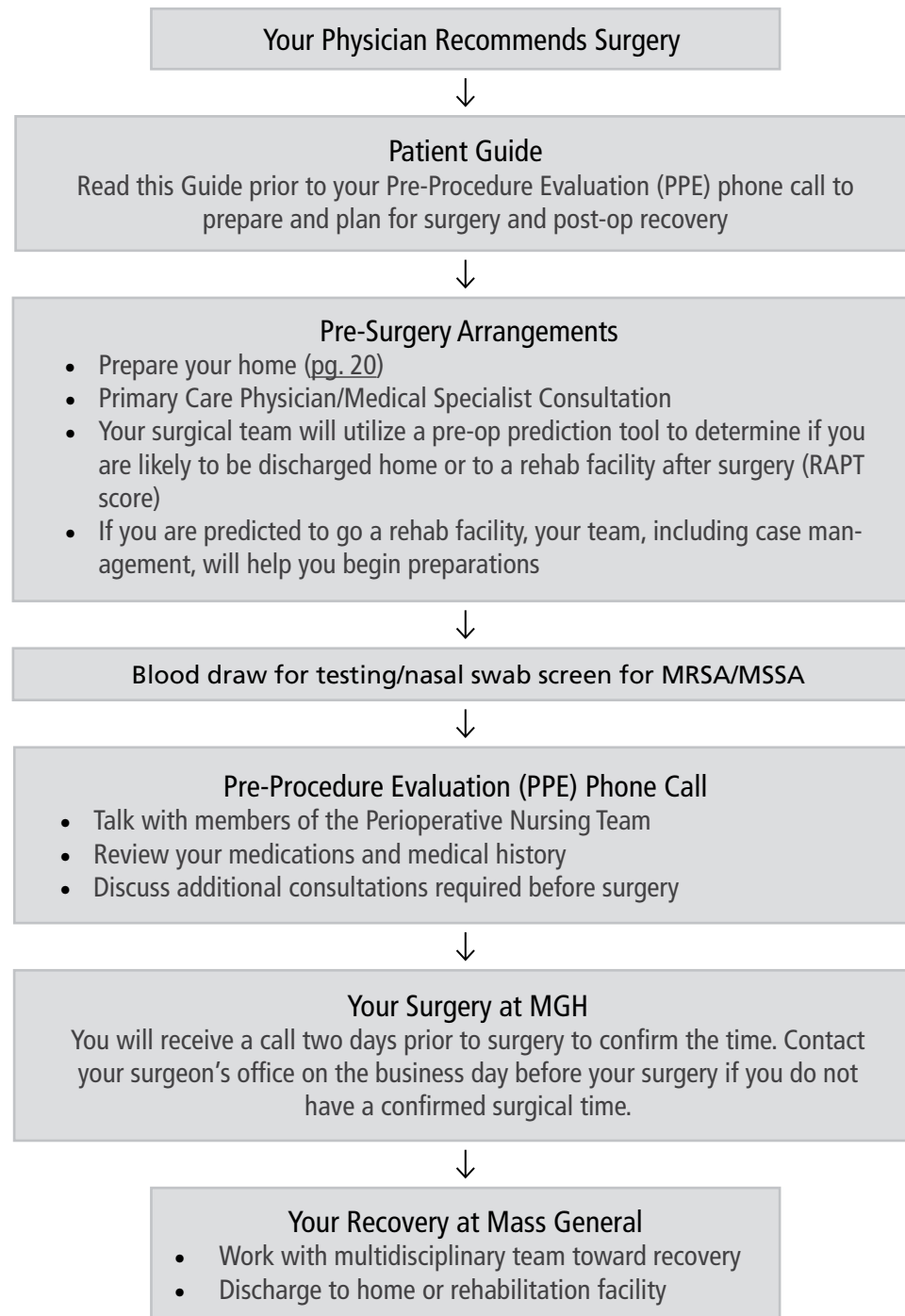
What You Can Expect

Surgical time for spinal procedures can vary depending on the number of vertebral levels addressed and the complexity of the case. Hospital stays vary on an individual basis. Patients are usually admitted on the morning of surgery. Routine care after spine surgery involves wound care, pain management, physical therapy and occupational therapy. These are described in greater detail later in this Guide.

Recovering from spine surgery depends on your general health before the procedure and your level of activity. The goal of recovery is to comfortably return to the activities of daily living that are important to you. While most spine surgery is successful in relieving pain and/or improving movement, recovery does take time. Nerve root discomfort may take time to heal and varies from patient to patient.

The soft tissues at the surgical site will take three to four months to completely heal, but the majority of the healing happens in the first six weeks. Building muscle strength and reconditioning your body takes time, and this can vary depending on your level of deconditioning prior to surgery. Bone healing and fusion consolidation generally happens between six and twelve months after surgery. Nerves may continue to heal for one to two years after surgery. Most patients experience back pain improvement, compared to preoperative pain, three to six months after surgery; however, this depends on your symptoms and diagnosis prior to surgery.

Section 4: Preparing for your Surgery



Once you have scheduled your surgery, preparing yourself physically and mentally are important for a healthy recovery. Here are a few steps to help you get ready for your surgery.

Surgery Pre-Registration and Pre-Surgical Assessment

Before you come to the hospital for surgery, you must complete your pre-registration. Your surgeon's administrative assistant will help you coordinate your pre-surgical appointments at MGH, as well as any required preoperative clearance or testing.

Insurance Co-Payments

Depending on the type of insurance you have, you may be responsible for a co-pay for your surgical procedure. The amount will vary depending on your insurance provider. A Mass General staff member from the Admitting Department will be contacting you to determine the best way to take care of your co-payment.

Pre-Procedure Evaluation (PPE) Visit

Once your surgery has been scheduled, your surgeon's office will arrange a PPE screening phone call. This call will be scheduled up to four weeks before your surgery. This is separate from your visit with your surgeon or PCP. During your phone call, you will talk to staff from the Anesthesia department. The purpose is to make sure you are medically optimized for your surgery under general anesthesia.

Before your PPE phone call, be sure to have the following information available:

- A list of your allergies
- A list of medications and dosages you take on a regular basis, including vitamins, herbs and other over-the-counter medications
- It is important to share with staff any pain medication you are taking as this will better allow us to plan for your comfort after surgery
- Results of any recent tests at other hospitals
- Names, addresses & phone numbers of your doctors, including specialists
- Any previous problems or reactions to anesthesia
- Questions you have about your surgery

The PPE nurse will:

- Confirm your surgical procedure
- Conduct a nursing assessment, which includes past medical conditions, previous hospitalizations and a complete list of medications including prescriptions, over-the-counter and any dietary supplements
- Confirm any allergies you have to drugs, food or latex
- Review arrival time for the day of surgery
- Review instructions for using Hibiclens (Chlorhexidine/CHG) wash and mupirocin nasal ointment (if indicated)

Anesthesia

A member of the Anesthesia Department is available to speak with you before surgery and let you know if any medications need to be stopped before surgery (see medication list in this Section).

Informed Consent

Before surgery you will be asked to sign consent forms. You have the right to understand your health condition and treatment options in words you can understand. Your doctor should also tell you about the risks and benefits of each treatment. Please feel free to ask questions.

Preparing Yourself Physically

Here are some tips that will help you focus on a smooth recovery.

- Stay as active as possible.
- Continue your normal activity and exercise programs.
- Watch your weight. Your doctor may ask you to lose weight before surgery. You may want to contact a dietitian for help losing weight or maintaining a lower weight after surgery. Resources are available by contacting our Nutrition Department at 617-726-2779.
- Discuss the need for a routine dental exam prior to surgery with your surgeon.
- If you have a fever, flu symptoms or other medical issues, please contact your surgeon's office.
- Stop smoking. If you smoke, try to stop or cut back on the number of cigarettes you smoke every day. Smoking can cause complications with the anesthesia you receive for your surgery. Smoking also inhibits wound healing and bone healing. There is a 50% chance your fusion will not heal if you continue to smoke. Smoking decreases blood flow to healing tissues by 25% and accelerates arthritic changes. People who smoke have more back and neck pain than non-smokers. Stopping even for a short time can be helpful.

For help, you may contact the Quit Smoking Programs at:

- Massachusetts General Hospital 617-726-7443

For further information, contact

- 1-800-TRY-TO-STOP or visit www.trytostop.org
- 1-800-QUIT-NOW or visit <http://cdc.gov/tobacco>

Preparing Yourself Mentally

Having surgery can be stressful. It is important to be an informed patient. Learn as much as you can about the surgery and discuss realistic expectations with your surgeon and staff. Share this information with family members and friends who will be involved in helping you with recovery. Do not hesitate to ask for help from others during your recovery. It is important to have help in place during your recovery period.

Case Management

If needed, you will meet with a case manager during your hospital stay. At this time, they will discuss options for services after discharge. Many patients are able to return directly home after hospitalization. Some may qualify for services, such as physical therapy or nursing, from a home-care agency. However, some patients may need additional time in an extended-care facility to achieve their goals. Your eligibility for care in an extended-care facility and/or home-care services is determined by a number of factors, including physical need and insurance coverage. Your insurance company must authorize any services. Your health care team will work with you to make the decision that is right for you.

After Discharge from Mass General - Rehab? Home?

When discussing your discharge, the terminology you will hear is “post acute level of care.” This means figuring out where you will be discharged to following your surgery at Mass General. Placement decision is based on:

- Assessment of a patient’s individual clinical needs
- Plans for ongoing treatment pre- and post-discharge
- Patient/family/responsible person choices and input
- Interdisciplinary team input
- Available post-hospital care options
- Available insurance/financial resources

You and your care team will determine what’s best for your needs in order to maximize your level of function and independence.



Long Term Acute Care (LTAC)

Patient requires hospital level care with high intensity medical and nursing services and moderate intensity rehabilitation services to establish and maintain stability.

MD: 5-7x/week
Nursing: >6 hppd
Rehabilitation: 1-3 hppd* as tolerated 5-7x/week

Average LOS: > 25 days

Inpatient Rehab Facility (IRF)

Patient requires hospital level care with high intensity rehabilitation services and moderate intensity medical and nursing services to improve functional dependence.

MD: 5-7x/week
Nursing: 5-6 hppd
Rehabilitation: >3 hppd as tolerated 5-7x/week

Average LOS: 12-16 days

Skilled Nursing Facility (SNF)

Patient requires moderate medical care, lower intensity rehabilitation and nursing care to establish/maintain stability.

MD/NP: 1-3x/week
Nursing: 3-4 hppd
Rehabilitation: <1-3 hppd

Average LOS: 10-20 days

Home Care/VNA

Patient is clinically and functionally able to return home but required ongoing care.

RN, PT, OT, SLP, MSW intermittent home visits. Number and frequency of visits depend on patient needs.

Average of 10-15 visits per episode of care for medically complex patients.

Outpatient Care

Patient is not homebound but requires ongoing care.

Transportation must be available and accessible.

Number and types of appointments are based on patient's progression. May include: MD, RN, PT, OT, SLP, Vestibular Rehab, Pulmonary Rehab, Cardiac Rehab, Day Care, Social Work and others.



Hospice Care: Home/Residential or General Inpatient (GIP)

Recommend starting with home/residential plan of care then transfer to a facility if needed. Federal law requires a doctor’s statement of a life expectancy of < 6 months.

Home or Residential: Can be provided in any setting; if an institutional setting, will have an added room and board charge; patient does not need to be DNR.

GIP: Can be provided in any facility setting (SNF/LTAC/Hospice House/Acute Hospital); Medicare requires facility to have a registered nurse providing direct care on all three shifts and to have overnight accommodations for family members; no room and board charge; patient must be DNR.

Planning for Your Return Home

It is important to begin planning for your return home before your surgical procedure. Arrange for transportation home from the hospital. Have family and friends available to help you with activities such as wound/incision care, household tasks, driving, and picking up prescriptions from the pharmacy.

Physical Therapy and/or Occupational Therapy goals to achieve prior to returning home include:

- Getting in and out of bed while the bed is in the flattened position without the use of a rail, using the logroll technique.
- Being able to come to a standing position with or without the help of an assistive device such as a walker or cane.
- Being able to walk at least 150 feet with or without the help of an assistive device such as a walker or cane.
- Being able to use the stairs with or without a rail (if used at home.) You may or may not require use of a cane to perform.
- Understanding that your only initial exercise at home may be to walk.
- Ability to sit and stand from a standard toilet or commode.
- Successful entry and exit from a tub or shower stall.
- Successful full body bathing and dressing with or without the use of adaptive equipment and incorporation of good body mechanics.
- Review of any precautions you may have prior to going home.

The Rehabilitation staff will help you plan for any equipment you may need at home, such as:

- Bedside commode
- Raised toilet seat
- Shower chair/bench
- Cane
- Handheld shower hose
- Safety bars/handrails
- Knee immobilizer
- Ankle foot orthosis (AFO)
- Neck or low back brace (as recommended by your surgeon)
- Long-handled adaptive equipment
- Rolling walker

This equipment is not always covered by your insurance.

Medication Guidelines

To prevent excessive bleeding during and after surgery, you should stop taking aspirin and other anti-inflammatory agents (Ibuprofen, Motrin, Advil, Aleve) 7-10 days before surgery. Other drugs that should also be stopped 7-10 days before surgery include Plavix, Warfarin (Coumadin), Eliquis, Xarelto or other similar anticoagulation drugs. Please confirm with your surgeon’s office as well as the clinician who prescribed you this medication. A complete list of medications and substances that should be stopped before surgery is provided in this Section. Anesthesia will review this with you.

- Do not take vitamins, fish oil, or other herbal supplements for one week before surgery.
- If aspirin is prescribed, please check with your primary care doctor or cardiologist before stopping this. You may take acetaminophen (Tylenol).
- You may not be aware of the many medicines that contain aspirin or acetaminophen. Most medicines that help to relieve the symptoms of cold or sinus congestion contain aspirin or acetaminophen. Look at the ingredients on the label to ensure your safety.
- Notify your surgeon if you are on Plavix, Warfarin (Coumadin), Eliquis, Xarelto or another anticoagulation medication.

The following is a partial list of other over-the-counter products that contain aspirin or aspirin-like medicine. These may affect bleeding during and after surgery. If you are taking any of these medicines, check with the Anesthesia Department about discontinuing use.

- | | | | |
|----------------------------------|----------------------|-------------------------|---------------|
| • Advil | • Bufferin | • 4-Way Cold Tabs | • Plavix |
| • Aleve | • Cephalgesic | • Ibuprofen | • Phenergan |
| • Alka-seltzer | • Children’s Aspirin | • Indocin | • Robaxisol |
| • Aluprin | • Congesprin | • Ketorolac | • Sine-Aid |
| • Anacin | • Cope | • Magnesium Salsicylate | • Sine-Off |
| • Arthritis-Strength Bufferin | • Coricidin | • Midol | • Soma |
| • A.S.A. & Codeine Compounds | • Coumadin | • Motrin | • Talwin |
| • Aspergum | • Darvon | • Nardil | • Tolectin |
| • Aspirin | • Dristan | • Naprosyn | • Triaminicin |
| • Aspirin-containing medications | • Ecotrin | • Norgesic Products | • Trigesic |
| • Bayer Aspirin | • Empirin | • Pepto Bismol | • Vanquish |
| | • Excedrin | • Percodan | • Voltaren |
| | • Fiorinal | • Piroxicam | • Zactrin |
| | • Flurbiprofen | | |

Showering with Antimicrobial Soap Before Surgery

Prevention of surgical wound infection is important to your recovery. One way you can help prevent infection is by bathing with an antimicrobial soap before your surgery.

Patients should shower with Hibiclens (Chlorhexidine/CHG) 2-4 days before their surgery and the morning of their surgery (meaning once a day for 3-5 days). Showering with Hibiclens/CHG before surgery may lower your risk for infection by reducing the germs on your skin. Hibiclens/CHG can be purchased over the counter at a pharmacy or grocery store.



Use Hibiclens/CHG soap instead of your regular soap - do not use both, as this dilutes the effect of Hibiclens/CHG. Using a sponge can help with lathering because Hibiclens/CHG soap does not lather as well as regular soap.

DO NOT USE Hibiclens/CHG::

- if you have an allergy to chlorhexidine-containing products
- on your head or face (If you get this soap into your eyes flush with water)
- on your genital area

Showering Instructions

These instructions will differ from the instructions on the Hibiclens/CHG package. Package instructions are meant for surgeons using this product as a skin antiseptic prior to performing the surgical procedure. Please use the following instructions for showering:

- Rinse your body thoroughly with water first.
- Turn water off to prevent rinsing Hibiclens/CHG off too soon.
- Wash from the neck downwards. Wash the part of your body (back, neck, abdomen, etc.) where your operation will be performed.
- Wash your body gently for five minutes. Do not scrub your skin too hard. You can use a sponge to help with lathering.
- Turn water back on, rinse well and pat dry with a clean towel.
- Do not apply powder, lotion, deodorant or hair products after third shower.
- Do not shave the area of your body where your surgery will be performed. Shaving increases your risk of infection.

Diet on the Day of Surgery

Do not eat or drink anything after 10:00pm the night before your surgery, unless otherwise instructed. This includes water, mints, candy or chewing gum. If you eat or drink after 10:00pm, your surgery may be cancelled.

Please refer to your medication list as discussed during your PPE phone call for those medications that you are to take on the day of surgery.

Preparing your Home

Prior to your surgery, there are several things you can do to make your home safer and more comfortable when you return home.

- For convenience, consider keeping a cordless phone near you or carrying your cell phone.
- Move furniture to make clear paths in your home. You may be using a walker or crutches after your surgery, so you will need more room to move around.
- Move items in your home to waist level or higher. This will prevent you from having to bend to reach items.
- Remove throw rugs that may cause you to slip or trip. Tape down and loose edges of large area rugs and extension cords
- Prepare and freeze meals before your surgery.
- Some patients arrange for a relative or friend to stay with them for 2-4 weeks after surgery.
- Stock up on necessary items like groceries, toiletries and any medications you might need.
- Make a plan to have your bills paid while you are recovering - whether that is signing-up for online bill pay or arranging with a friend or relative who can help you.

Section 5: PPE Phone Call & Anesthesia

PPE Phone Call

Prior to all procedures, all patients go through a pre-procedural evaluation (PPE phone call). This will involve a pre-arranged telephone call with a member of our perioperative nursing team. This phone call lasts about 45-60 minutes.

Your PPE Phone Call is important because it ensures that you are ready to undergo a surgical procedure and minimizes any potential complications.

Before your evaluation, you will have blood tests done at Mass General or through your Primary Care Physician (PCP). On your PPE Phone Call, a member of our perioperative team will review your blood tests and discuss your anesthetic plan.

Some patients will be screened for a bacteria called *Staphylococcus aureus* (Staph).

Anesthesia

Anesthesiologists and nurse anesthetists are responsible for your safety and comfort during surgery. A member of the Anesthesia Department will be with you at all times in the Operating Room. Nearly all spine surgeries are performed under general anesthesia.

General anesthesia involves medications that keep you completely asleep during surgery. These medications are given intravenously (IV) and by inhalation. Some of the most common side effects of general anesthesia include nausea, vomiting and a sore throat. You will be given medication to prevent nausea. The anesthesiologist will describe these risks to you when you sign a consent form for anesthesia. This consent is separate from your consent for surgery.

Section 6: Your Surgery

Day Before Surgery

The day before your surgery, please follow these instructions:

- Shower and wash your body thoroughly with Hibiclens/CHG
- Follow the instructions you received at your PPE Phone Call about all your medications
- At 10pm, stop eating all solid foods or dairy products. Stop chewing gum and stop eating candy. Stop all tube feedings. If your surgeon has provided you with specific diet instructions in preparation for your surgery/procedure such as, bowel prep instructions, please follow them carefully. Remember to drink clear liquids to stay well hydrated unless otherwise instructed by surgeon.
- After 10pm, while you are awake, please try to drink one or two tall glasses of clear liquids every one to two hours. You may drink any of following clear liquids from the list below.

Day of your Surgery

- One hour before checking in to the hospital drink one to two tall glasses of clear liquids from the list below to ensure you are adequately hydrated. After finishing it, please stop drinking.
- If you are diabetic and feel symptoms of a low blood sugar or your finger stick reading is low, please drink one of the clear liquids that contains sugar such as, apple juice, grape juice, or regular soda.

Approved list of clear liquids:

- Gatorade®
- Powerade®
- Clearfast ®
- Pedialyte ®
- Apple juice
- Cranberry juice
- Grape juice
- Water
- Regular or diet soda (such as Coke®, Sprite®, Pepsi®)
- Black coffee or black tea - (NO milk, cream, or non-dairy creamer)

What to Bring to the Hospital

- Insurance and prescription cards
- List of medications and allergies
- If you use an inhaler or eye drops, please bring them with you
- Flat, comfortable athletic or walking shoes (slip-on shoes can be helpful and easier to wear after surgery, but they must have a back)
- Elastic waist-band pants and pajamas
- Personal toiletries (Mass General will provide basic toiletries, but if you want specific products, please bring them from home)
- Books, magazines or other hobbies
- Eyeglasses and a case for storing them. Please do not bring or wear contact lens to your procedure.

Please **DO NOT BRING** any personal valuables such as jewelry, credit cards or large amounts of cash.

Parking at Mass General

If the person who drops you off for surgery is planning to stay during your procedure, they should park in the Fruit Street or Parkman Street garage. MGH patients and visitors who park in these garages are eligible for discounted parking rates. Parking tickets will be validated at the Cashier in the central payment office on the ground floor of each garage. Valet parking is available from 6:00am-8:00pm Monday through Friday at the Wang Building and costs between \$13 and \$18.

Validated parking rates:

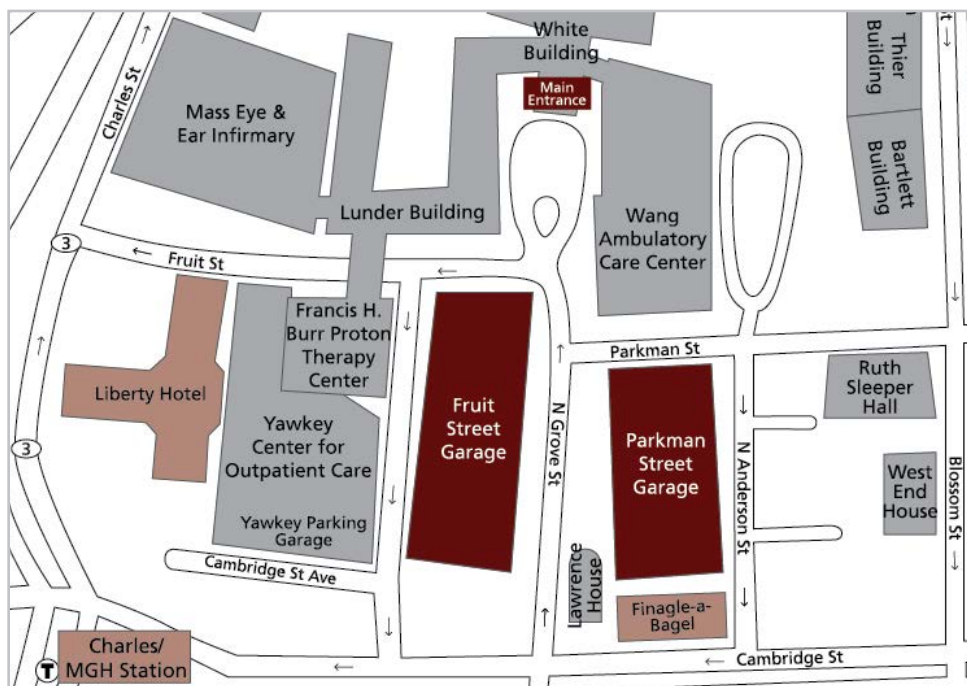
0-1 hour: \$10

1-2 hours: \$11

2-4 hours: \$12

4-24 hours: \$15

Valet parking: \$15



Assistance & Information

Ambassadors, wearing coral jackets, are available in Mass General’s main lobby and the Wang building lobby. Ambassadors welcome and direct patients arriving at the hospital and help patients and visitors with special assistance requests such as getting out of the car or into a wheelchair. If you need assistance or have questions, ambassadors are there to help and direct you where you need to go.

Checking-in at Mass General

When you arrive at MGH on the day of your surgery, please report to the Center for Perioperative Care (CPC) on the 3rd floor of the Wang Building.

How to get to the CPC:

- Go to the Wang Building (either through entrance next to the valet parking entrance or through the main lobby of the White Building).
- Use the Wang elevators and proceed to the 3rd floor.
- Follow signs for the CPC and check-in at the reception desk

At the Center for Perioperative Care

You will meet with a nurse at the CPC. Please have a list of your medications and allergies ready. If you use an inhaler, please bring it with you. You will change into a hospital gown and be given slippers. You will also receive an identification bracelet, which you should keep on until you leave MGH. You will be asked to use the bathroom before leaving the CPC. Your family can stay with you until you are escorted to the operating room.

As you are escorted to the operating room, your family members and/or friends will be directed to the Yawkey Family Waiting Area located on the second floor of the Yawkey Center for Outpatient Care. Let your nurse know if you have family members and/or friends waiting for you there. If you do not have a family member or friend with you and somebody should be called, give your nurse the phone number to reach your contact person.

After surgery, you will be taken to the Recovery Room (Post-Anesthesia Care Unit or PACU) where you will remain for two to four hours. Then you will be transported to your assigned room. The receptionist in the Yawkey Family Waiting Area will update any visitors of your progress.

Your Surgery

In the OR, the surgical team will work to ensure your procedure goes smoothly. They will be continuously watching your heart rate, blood pressure and breathing. A catheter (small tube) may be placed in your bladder to keep track of fluids during surgery. Your surgeon will speak with your family when surgery is completed.

Information for Visitors

There are many amenities in and around Mass General for you and your visitors. The Yawkey Family Waiting Area where your visitors can wait is located near Coffee South and the Riverside Cafe. See the corresponding map on the next page to find out where the places listed below are located. Feel free to ask any of our ambassadors in the lobby. For patients and visitors who need to stay in a hotel, mention Mass General when you book your room. At times, the hotels offer discounted rates to Mass General patients and their families.

Food: MGH Campus

1. **Eat Street Cafe:**
Ellison Bldg, lower level
2. **Coffee Central:**
Gray Bldg, main lobby
3. **Tea Leaves and Coffee Beans:**
Wang Bldg, main lobby
4. **Riverside Cafe:**
Yawkey Bldg, main lobby
5. **Coffee South:**
Yawkey Bldg, main lobby

Drug Stores

14. **Mass General Pharmacy:**
Wang Building, 1st floor
617-724-3100
15. **CVS Pharmacy:**
(next to MGH T Station)
155 Charles Street
617-523-1028
16. **CVS Pharmacy:**
191 Cambridge Street
617-367-0441

Food: Around MGH

6. **Antonio's:**
288 Cambridge Street
7. **J. Pace & Sons:**
75 Blossom Court
8. **Starbucks:**
222 Cambridge Street
9. **Dunkin Donuts:**
106 Cambridge Street
10. **Flour Bakery & Cafe:**
209 Cambridge Street
11. **Blackbird Doughnuts:**
175 Cambridge Street
12. **Whole Foods:**
181 Cambridge Street
13. **Anna's Taqueria:**
242 Cambridge Street

Hotels

17. **Wyndham Hotel:**
5 Blossom Street, Boston
1-888-465-4329
18. **Liberty Hotel:**
215 Charles Street, Boston
617-224-4000
19. **The Boxer Hotel:**
107 Merrimac Street, Boston
617-624-0202
20. **The Whitney Hotel:**
170 Charles Street, Boston
888-673-3650
21. **Courtyard Marriott Downtown:**
275 Tremont Street, Boston
617-426-1400

Section 7: Your Hospital Stay

During your recovery, the focus of your care will be on managing your pain, caring for your incision and getting you moving again. It is difficult to describe a typical day in the hospital because each patient's care depends on their specific needs. One thing is fairly certain: you will be busy.

Day of Surgery

Vital signs. A nurse or patient care assistant will take your vital signs several times a day. This may include your temperature, blood pressure, heart rate, oxygen level and pain levels.

Medications: Your clinician will order your medications. If you have any questions about your medicines, please be sure to ask a member of your care team.

Managing your pain: Your pain will be managed with either oral or IV medication the first postoperative night. Almost all patients are on oral pain medication the day after surgery. It is not uncommon to have pain after surgery.

Your care team will make every effort to keep you comfortable. If you ever feel that your pain is not well controlled, you should tell a member of your care team as soon as possible.

- If your pain is being controlled by a PCA (Patient Controlled Analgesia) pump, you can give yourself a dose of pain medication by pushing the button that controls the pump. In all cases, the pump is set with individual limits ordered by your clinician to prevent overdose or respiratory depression.
- Pain medication, both narcotic and non-narcotic, can also be taken by mouth. Keep in mind that it is important to take pain medicine when you are having pain. This will help you get up and move around in a shorter amount of time, which helps speed up your recovery.

Ice: You may use ice to apply to your surgical site to decrease pain and swelling.

Care of your incision: Your incision will be covered with a bandage (dressing) for the first few days after surgery. If you have an external drain from your incision, your surgeon will remove the drain within a few days after surgery.

Foley catheter: If you have a bladder catheter (tube), your nurse will check the drainage from the catheter. Foley catheters are most often removed the day after surgery. Your short-term goal should be to get up and out of bed as quickly as possible to be able to remove the catheter.

IV (Intravenous catheter): Your nurse will also check on IV fluids and antibiotics you receive.

Incentive Spirometer (IS): Patients often take shallow breaths when lying in bed, or in pain, after surgery. Deep breathing exercises keep the bases of your lungs open; this helps to prevent respiratory infection such as pneumonia. You will be asked to cough and breathe deeply every hour while you are awake and use an incentive spirometer (clear plastic device to assist with deep breathing).



Diet: Your diet will go from liquids to solids as your stomach settles down in the days after surgery. Meal service is provided three times daily. You will be given menus to choose foods that you like. Snacks and beverages are almost always available at the Nursing Station.

Tests: You may have more tests including lab work or x-rays.

Rounds: Your surgeon is the leader of your health care team. During your hospital stay various members of your health care team may visit you.

Rehabilitation: The rehabilitation staff includes the physical and occupational therapist as well as the physical therapy assistant. Depending on your surgery and your individual needs, the team of your MD, PA, NP and RN will determine the appropriate therapy to consult to evaluate you and work on regaining your mobility. You may only need one service, both PT and OT, or possibly neither.

Discharge planning: Early in your stay, your health care team will work with you and your family to plan for your needs after leaving the hospital.

Frequently Asked Questions throughout Your Hospital Stay

“When will I be able to get out of bed and start walking?”

Getting out of bed and walking will be one of your main goals after surgery. These tasks may begin as soon as the same day as your surgery. It is anticipated that on a daily basis you will be getting out of bed and walking.

“How difficult will it be for me to get out of bed and start walking?”

That depends on many factors. The most important things to consider: the complexity of the surgery you have, your level of pain after surgery, and how mobile you were just prior to surgery. In some cases, you may require a walking aid such as a cane or a walker with wheels on it. Many patients are able to walk without having to use a walking aid after surgery.

“If I feel pain when I try to get out of bed or walk (especially the first time), is that a bad thing? Does it mean I have done something wrong?”

Pain after surgery is expected, and it is normal to have pain when trying to get out of bed and walk. If you have pain when trying to get out of bed and walk, it does not mean anything is wrong. One of the main goals of your care team is to make sure your pain is well controlled and tolerable, especially in before and after having you get out of bed and walking.

“Who will help me to get out of bed and start walking?”

Many of the members of your care team are responsible for, and participate in, helping you begin to get out of bed and walking. A combination of nurses, nursing assistants, and in some cases, physical and/or occupational therapists will help you with this. Many patients, after some initial help, are able to get themselves out of bed and walk prior to leaving the hospital.

“Will I need an assistive device to walk when I get home?”

Even if you were walking without an assistive device, it is not uncommon to begin walking with an assistive device such as a rolling walker immediately after surgery. Progression to a cane or no device is expected before you leave the hospital, if applicable (unless you were using an assistive device prior to surgery).

“How soon will I not require any help to get out of bed and take a walk?”

That depends on many factors as well. Some patients are able to get out of bed and walk without assistance within a few hours after their surgical procedure is finished. Some patients require assistance to help get out of bed and walk throughout their hospital stay. In cases where patients need assistance of another person to get out of bed and walk throughout their entire hospital stay, it may be recommended for that patient (at the time of discharge from the hospital) to transition to an extended-care facility before going home. The goal after surgery is to have you walk several times a day on the floor with help, as needed. If you are independently walking, you may likely not require rehabilitation services to evaluate you.

“Is there a situation where it would be recommended that I NOT get out of bed and take a walk?”

On very rare occasions, your surgeon may want to keep you in bed for a short time after surgery (24-48 hours) for medical reasons. Outside of that situation, you will be encouraged to get out of bed and walk every day you are in the hospital.

Daily Plan of Care

Everyone progresses at his or her own pace. The activities listed below are a guideline for what to expect during your hospital stay.

Post-Operative Day 1

- Continue with incentive spirometer to exercise your lungs.
- Continue with oral pain medications or a pain pump (PCA, Patient Controlled Analgesia) that you control. Most patients are switched from a PCA pump to oral pain medications within 24 hours after surgery. It is important to communicate with staff how well your pain is being relieved.
- A blood thinning (anticoagulant) medication may be used, depending on recommendation of your surgeon.
- The nursing staff will assist you with bathing, changing positions in bed, and walking.
- A member of your care team will remove the drain tube (if applicable) from your incision and may change the bandage.
- An orthopaedic resident, PA and/or NP will make rounds daily.
- You will continue to have a IV access.
- Additional blood may be administered if needed.
- You may continue to have a bladder catheter if needed.
- Compression boots will be worn to promote circulation and prevent blood clots. You may also have elastic (TEDS) stockings.
- Blood tests will be done for routine monitoring.
- You will begin taking liquids and solid foods in your diet as tolerated.
- A case manager or social worker may come to see you to further discuss your discharge plan and arrange for home services if needed.

Post-Operative Day 2

- You will continue with an incentive spirometer to exercise your lungs.
- Pain medicines will continue, if you need them.
- A blood thinning (anticoagulant) medication may continue if recommended.
- An orthopaedic resident, PA and/or NP will make rounds daily
- IV fluids and antibiotics may be discontinued.
- Your bandage will be monitored and changed as needed.
- You will be given laxatives twice daily as needed. Narcotic pain medication and anesthesia will make you constipated, so all patients are on a bowel regimen after surgery.
- Compression boots will be worn to promote circulation and prevent blood clots. You may also have elastic (TEDS) stockings.
- The bladder catheter may be removed.
- Lab tests may be done.
- Your diet will be advanced as tolerated and fluids increased to prevent constipation.
- If you have not already done so, encourage a family member or friend to come to the hospital to review the discharge planning with a member of your health care team. Staff will provide a tentative discharge date and time so you can arrange for transportation home.
- A case manager or social worker may come to see you to further discuss your discharge plan and arrange for home services if needed.

Post-Operative Day 3

- You will continue with an incentive spirometer to exercise your lungs.
- A blood thinning (anticoagulant) medication may continue if recommended.
- An orthopaedic resident, PA and/or NP will make rounds daily
- Pain medicines will continue, if you need them.
- Your bandage will be monitored and changed as needed.
- Lab tests may be done.
- You will continue with a bowel regimen.
- Your nurse will review your discharge instructions, which includes any medications you will be taking at home, as well as any new prescriptions.
- You will resume your usual diet as tolerated, increasing fluids to prevent constipation.
- A case manager or social worker may come to see you to confirm your discharge plan and address any outstanding questions you may have.

Physical Therapy (PT) & Exercise

The first day after surgery you may meet with a physical therapist who will initiate exercises and progress your mobility. The following days, you will continue to progress your activity by practicing walking/gait training and stair training.

You will continue to work with the physical therapist on exercises and functional training throughout your hospital stay.

For the first four to six weeks after surgery, you may need to use an assistive device, such as a walker or a cane. When you transition off an assistive device depends greatly on your health, strength and stability. Along with your surgical team, your physical therapist will help you make the right transition.

Deep Breathing

You will continue breathing exercises using the incentive spirometer, coughing and deep breathing. It is important to keep your lungs free of fluids and mucus.

Fluids & Diet

Depending on your unique situation, your doctor may recommend a clear liquid diet until you are ready to eat solid food.

Pain Management

During the first days and weeks after surgery, some patients need to take opioid pain medication. The use of these medicines is strictly regulated in Massachusetts, especially if they are needed for more than seven days. These narcotic pain medications are linked to bothersome intestinal side effects, accidental injuries, addiction and overdose deaths when used in high doses or for a long time. If you think you were prescribed too many pills, you can ask the pharmacist to lower the number of pills you receive. For more information on safe use of opioids and non-drug ways to control pain, see the *Pain Control After Spine Surgery Resource Guide* available on our website.

Remember: Some narcotic pain medications cannot be called into a pharmacy. Plan ahead if your prescription is running low to allow for timely refills. Please provide your surgical team 24-48 hours notice.

Section 8: Leaving Mass General

Leaving the hospital can feel scary because your recovery is not complete. Some days you will feel that you made progress and other days will be harder.

Your Discharge from MGH

If you are being discharged home, any necessary home equipment will be ordered for you. If you are using a Home Health Care Agency, your care team will let the agency know what equipment you need. If your surgeon feels that you should transition to outpatient PT prior to your first follow-up appointment, you may be given a prescription for PT. If you are being discharged to a facility, any necessary equipment will be ordered by the facility.

Most insurance does not cover bathroom equipment, but you can check with your insurance company. You could also borrow equipment from friends/family, or contact your local Council on Aging/Senior Center, as many of these organizations may loan you these items.

Time of Discharge

At the time of discharge, you will receive a discharge summary that includes:

- your current medications
- a summary of your hospital stay, and
- instructions for post-operative follow-up at MGH

Please call your doctor's office at your convenience to schedule your post-op visit. Most patients return to the office within 2-4 weeks and see one of our Advanced Practice Providers or your surgeon. During this visit, we will assess your incision, evaluate your functional mobility status, review your x-rays and address any questions you may have.

You will return to the office periodically for repeat x-rays and a thorough evaluation. During these visits, you will participate in surveys regarding your general health, level of activity, pain and other symptoms. These questionnaires are called Patient Reported Outcomes and are very important to help monitor how our patients are doing before and after surgery, and provides valuable information back to our clinical team to improve the care we provide. MGH Orthopaedics is a pioneer in compiling such valuable information about the quality of our services.

Home Care

If you are independently mobile or use the assistance of a walker or crutches, and independent in your exercise program, you may be discharged directly home with or without home care services.

Home care services are intermittent (one to several times a week depending on your needs) and are provided by a Home Health Care Agency, which is similar to a Visiting Nurse Agency (VNA) that is contracted with your insurance. These services need to be ordered by your clinician if medically necessary. Home care services may be provided by visiting nurses and physical and/or occupational therapists. The duration of services is determined by your home care provider and clinician based on your needs and progress.

The Case Manager on your team will identify local agencies contracted with your insurance and can initiate a referral to the agency of your choice. An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm home care referrals. If you have used a home care agency before or have recommendations from family or friends, please make a list and bring this with you to the hospital.

Skilled Nursing Facility Rehabilitation (SNF)

If you are not independently mobile and do not have assistance at home, you may need an inpatient rehabilitation setting. To qualify for inpatient rehab in a SNF, you need to meet criteria for admission and have insurance coverage.

Prior to surgery our Spine Team will work with you to identify the likelihood of discharge to home or rehab.

You, along with your family and friends, are encouraged to tour facilities and inform your care team of your selections before your surgery.

Referrals per your request will be initiated by the Preadmission Orthopaedic Nurse Case Manager in an effort to secure bed availability. There is no guarantee of bed availability, unless the facility has a prebooking policy, so we encourage you to provide more than one option.

An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm the SNF referrals, acceptance by facility, insurance authorization and bed availability.

Resources for helping to compare skilled nursing facilities are available at:

- www.medicare.gov/nhcompare
- <http://webapps.ehs.state.ma.us/nursehome>
- <https://www.mass.gov/guides/choosing-a-nursing-home>

Acute Rehabilitation Hospital

If you are not independent with your mobility, do not have assistance at home and/or have complex medical issues, you may qualify for intense medical management and rehabilitation.

The Case Manager can provide additional information if you feel that you may qualify for this level and discuss other criteria that must be met with you.

An Inpatient Nurse Case Manager will follow up on your progress in the hospital and confirm the acute rehabilitation referrals, acceptance by the facility, insurance authorization and bed availability.

Transportation

The Inpatient Nurse Case Manager, with your clinician and therapist, will assess the most appropriate transportation for you to travel home or to a facility. The Inpatient Nurse Case Manager will also identify insurance coverage and assess if an ambulance is medically necessary. Most patients can travel home in a car. Most insurances don't cover an ambulance home and some do not cover any ambulance transportation.

Discharge time is approximately 10:00 am, but speak with your care team for the most accurate time frame for your discharge.

MGH Outpatient Pharmacy

The MGH has an outpatient pharmacy, which is located on the first floor of the Wang Ambulatory Care Building.

If you are being discharged home, you can get your prescriptions filled here before you go home. Please have your prescription card with you so the pharmacist may verify your insurance coverage and what out-of-pocket costs you will incur. The pharmacy accepts cash, credit cards and checks. Payment is due when medications are picked up. Your pharmacy costs cannot be added to your inpatient hospital bill.

Inform your care team as early as possible if you are interested in utilizing the MGH outpatient pharmacy. If you are transferring to another facility, discharge prescriptions will be coordinated by the facility.

Hours of Operation: Monday-Friday: 9:00 a.m. – 5:30 p.m.

Saturday: 9:00 a.m. – 3:00 p.m.

Sunday & holidays: 9:00 a.m. – 12:30 p.m.

Phone Number: 617-724-3100

Section 9: Returning Home

Daily Guidelines

In general, the guidelines below will apply whether you are going directly home or to an extended-care facility. Your healthcare team will also provide you with additional instructions, depending on the type of surgery. In the first week after leaving the hospital, please follow these daily guidelines:

- Intermittent pain in the arms and legs is very common after spine surgery. Your care team will discuss with you which symptoms are concerning and when to notify the office.
- Continue increasing your walking distance and time.
- Take pain medicine as needed. As you begin to feel better, you can increase the duration between doses. Tylenol is a good non-narcotic pain reliever. Do not exceed more than 3,000mg of Tylenol per day.
- Apply ice to the surgical area (with a protective barrier, i.e. pillow case) when you take pain medication, or after increased activity such as walking. Ice for 20-30 minutes at a time. Do not ice more often than every two hours, as this could increase risk of developing a mild frostbite. Keep your incision dry.
- Follow instructions for wound care.
- Drink plenty of liquids and eat healthy foods. Increase your protein intake after surgery. If you are diabetic, keep your blood sugars under tight control.
- You may be advised to take daily doses of iron to build up your blood because it is common to be somewhat anemic after surgery.
- You will need a bowel regimen to prevent constipation related to pain medications and iron supplementation. You should take a daily stool softener and laxative as long as you are taking narcotic pain medication or until you begin having regular bowel movements.

Signs and Symptoms to Report

Any of the signals listed below can be of concern. If you experience any of the following when you go home, call your care team immediately:

- Temperature greater than 101.5°
- Signs of infection (redness, swelling, draining wound, increasing pain)
- Arm, leg or calf tenderness or pain
- Chest pain, shortness of breath, rapid heartbeat
- Persistent nausea and vomiting
- Bruising easily

Getting Back to Your Usual Activities

During the first few weeks at home, you can adapt what you learned at the hospital to your own setting. You should continue to increase your walking distance. Staff from a home-care agency, such as a nurse or therapist, may visit as you make the transition to home. Most people feel very tired when they leave the hospital. For this reason, it is best to pace yourself as you return to your daily routine. If you feel tired, take a short morning or afternoon nap. As you recover, your energy will increase. You cannot do everything yourself. Do not be afraid to ask for help with daily tasks such as grocery shopping, laundry and housecleaning if needed. Take care of yourself. Try to find ways to be good to yourself during this time.

Outpatient Rehabilitation Services

Once you return home after surgery, outpatient Physical Therapy or Occupational Therapy will be discussed with your surgeon at your follow-up. This is the setting when formal exercise, strengthening and flexibility will be addressed. Typically, this is recommended around the 6-12 week mark, but is dependent on your healing and progress.

Outpatient services include:

- **Physical Therapy:** members of the Physical Therapy staff work with you to decrease pain and swelling, and help you regain range of motion, strength, balance, and mobility. The primary focus is to assist you in recovery from surgery and regaining functional independence.
- **Occupational Therapy:** the Occupational Therapy staff can help you to better perform important activities of daily living including self-care, homemaking, work and leisure. Therapy might include teaching you ways to conserve energy and use good body mechanics, recommendations for adaptive equipment and suggestions to improve your ability to safely function at home and in the community.

Taking Care of your Skin After Surgery

It is important to carefully monitor your skin after you return home from the hospital. Examine all areas of your skin, and for the areas you cannot see, ask somebody else to look for you or try using a hand magnifying mirror. Areas where your bones are near the surface of the skin can break down and cause sores. A sore will look pink or red at first, and then the skin might break open.

Areas to examine include:

- shoulders
- buttocks
- elbows
- heels
- hips

These areas should be kept clean and dry. Rub these areas with lotion to help circulation, but do not put lotion directly on your incision. Let your doctor know if you have any areas on your skin that are red or have an open sore.

Your Surgical Incision

For the first six days after surgery, please keep your incision dry and covered. You may shower during this time as long as you use a watertight dressing. Once you are out of the shower, change the dressing. A dry sterile dressing should be applied until there is no drainage at the incision site. At that point, typically around day six, your incision can be open to the air.

If you have sutures or staples, these will be removed for you at your first post-operative appointment. If the sutures or staples catch on your clothes, you may cover your incision with a gauze dressing. If you have steri-strips (small pieces of adhesive tape), please do not remove these. Do not use band-aids on your incision.

Driving After Surgery

Patients often ask when they can begin to drive again after having spine surgery. Please discuss your driving needs with your surgeon's office.

Preventing Blood Clots

It is important for you to know the signs and symptoms of a blood clot. If you experience any of these signs, please call your surgeon's office immediately:

- Pain and tenderness in the calf of the leg
- Swelling in the leg that does not go down with rest and elevation
- Low grade fever

Household Tips from the Occupational Therapy

Keep these helpful tips in mind when doing activities around the house. It is important to share this information with family or friends who might be assisting you. These tips are in addition to the Home Safety Checklist provided in Section 3.

General Tips

- If you are using a walker or cane, wear an apron with pockets or a belt pack. Remember, you will not be able to carry things in your hands while using these devices.
- If you are using a walker, consider buying a walker bag or basket for use in transporting items.
- Store frequently used items between waist and shoulder level. Do not stand on your tiptoes or bend excessively to reach for things. Use your "grabber" to do this whenever possible.
- Arrange for help with child or pet care.
- Always use your assistive device if prescribed when walking. It is not safe to hold onto furniture, even for a few steps.
- Ground floor bedrooms and bathrooms are ideal, but if your bedroom or bathroom is upstairs, you will be taught to go up and down stairs.
- Save a new book or project to tackle once you are home.

Kitchen Tips

- If possible, move your kitchen table close enough to the counter so you can easily pass food items back and forth without twisting.
- To move an item from one part of the counter to the other, simply slide it along the countertop. If the item is hot, place a potholder underneath it.
- If you must set your cane aside temporarily while preparing food at the counter, make sure it is in a safe place where it will not fall to the floor. You may rest your hips or stomach against the counter for support.
- Frequently used refrigerated items should be within easy reach (between waist and shoulder level).
- Keep your freezer stocked with ready-to-eat foods.
- Lighter weight and single serving items are easier to handle than large containers.
- Arrange kitchen cabinets so that frequently used items are within easy reach to avoid excessive bending or reaching.
- Use only stovetop or counter-level appliances to prepare food. Do not use low ovens or attempt to load or unload the bottom rack of the dishwasher.
- Keep your trash can accessible.

Bathroom Tips

- If you are more than five feet tall, you may need a raised toilet seat or commode.
- Do not use towel bars, soap dish handles, shower curtain rods or toilet paper dispensers for support with getting out of the shower, or on and off the toilet.
- Use a tub or shower chair as recommended by your occupational therapist.
- It is important that you are able to reach your soap, shampoo, washcloth and long-handled sponge in the shower without excessive bending. Consider the use of a shower caddy for easy reach. Consider using liquid soap in lieu of a bar of soap to avoid dropping the soap out of reach.
- For a homemade “soap on a rope,” put a bar of soap in the leg of a pair of panty hose. Tie the other end to a tub seat or soap dish.
- Always make sure there is no water on the floor when stepping in and out of the tub or shower. If necessary, seek help to dry the area before attempting to enter or exit the shower.
- Place an anti-skid rug outside of the tub or shower stall.
- Use a towel to dry self before exiting the shower or tub, or consider using a terry cloth robe to dry yourself.
- Sit down to complete drying and dressing.
- Store long-handled equipment in an easy-to-reach location when doing activities of daily living, especially dressing the lower body.

If you have any questions about these suggestions once you are home, do not hesitate to contact the Mass General Hospital Occupation Therapy Department at 617-726-2960. An occupational therapist will be happy to talk with you.

Section 10: Frequently Asked Questions

What is the recovery time?

Everyone heals from surgery at a different pace. It usually takes about three months to gradually return to normal function without using any devices; however, it could take longer.

How long do I need a bandage?

You should use a bandage for about one week until your incision is closed and there is no fluid oozing from your wound. Starting three days after surgery, it should be changed daily to a new, dry, sterile gauze until there is no more drainage. You may continue to wear a bandage to protect the incision from the irritation of clothing.

Should I use ice or heat?

Ice should be used for the first several days, particularly if you have a lot of swelling or discomfort. Ice should also be used after activity (such as walking). Once the initial swelling has gone down, you may use ice and/or heat. The staff will help you with this while you are in the hospital. Please keep your incision dry.

When can I shower (get incision wet)?

You may start showering with the incision covered 48 hours after surgery. Initially, try to keep the incision dry with a clear plastic dressing or plastic wrap. If it gets wet, pat it dry. It is usually advised that you wait to shower with the incision uncovered until the wound is closed and there has been no drainage, typically around post-op day six. Stay out of tubs and pools until you have clearance to do so from your surgeon's office.

How long will I be on pain medicine?

You may need some form of pain medicine for about two to three months. At first, you will take a strong medicine, such as a narcotic. Most people are able to stop narcotics within one month after surgery. You can then change to an over-the-counter pain medicine such as Tylenol.

What activities can I do after surgery?

You may return to most activities when you feel up to it. You should avoid high impact activities such as running, downhill skiing, and vigorous racquet sports such as singles tennis or squash. Please discuss this with your physician at your follow-up visit.

What exercises should I do?

Walking is the preferred exercise until you see your surgeon at your follow-up. You may be instructed by your physical therapist on appropriate exercises and will be given a list to follow. Be sure to talk with your surgeon and your therapists (PT and/or OT) about when you can begin new activities.

Can I have sex?

For the most part, you can gradually resume sexual activity when you are comfortable. Typically, we recommend waiting about 4-6 weeks after surgery.

When can I drive?

You should not drive until you are cleared by your surgeon's office. Typically, we recommend waiting until you are no longer taking narcotic pain medication or muscle relaxants.

When can I return to work?

This depends on the type of work you do. You may return to work after about one month if your work involves mostly sitting. If your work is more rigorous, you may require up to three months before you can return to full work. In some cases, more time may be needed. Check with your surgeon.

When can I travel?

You may travel as soon as you feel comfortable but avoid long-distance travel for four to six weeks or until after seeing your surgeon. We advise you to get up to stretch or walk at least once an hour when taking long trips. This is important to help prevent blood clots.

Will my spinal implants set off the machines at airport security?

The increasing sensitivity of security detectors at airports and public buildings may cause your implants to trigger an alert. We recommend you alert airport security that you have spinal implants. In some situations, security guards may also move a wand up and down your back to locate your fusion instrumentation. They may pat you down on the area that triggers the wand.

How long should I take iron supplements?

Four weeks is usually enough time to build up blood after surgery.

What should I do about constipation after surgery?

It is very common to have constipation after surgery, especially when taking narcotic pain medication. A simple over-the-counter stool softener (such as Colace) taken with a laxative (such as Senokot) is the best way to prevent this problem. Increasing fruits and vegetables in your diet will also help. In some instances, you may require additional bowel medication (i.e. MiraLAX or Milk of Magnesia) and a suppository or enema.

Can I drink alcohol?

It can be very dangerous to ingest narcotic pain medication with alcohol. Alcohol use is not advised until you have stopped your narcotic pain medication and are walking steadily.

I feel depressed. Is this normal?

It is common to have feelings of depression or trouble sleeping after your surgery. This may be due to a variety of factors such as difficulty getting around, discomfort or increased dependency on others. These feelings will typically fade as you begin to return to your regular activities. If they continue, consult your primary care physician.

When do I need to follow up with my surgeon?

Follow-up appointments are usually made at two to four weeks, six months and yearly. In some cases, there will be more frequent follow-up appointments needed. Check with your surgeon's office for specifics.

When do my sutures come out?

If your sutures are absorbable, they do not need to be removed. The steri-strips can be kept in place until they fall off on their own. Do not remove steri-strips. They will help keep the skin edges together. If your sutures are not absorbable, they will need to be removed after 14 days. Nonabsorbable stitches can be removed by a visiting nurse, PCP, or your surgeon's office; instructions may be clarified in your discharge paperwork.

Recommended Websites**American Academy of Orthopedic Surgeons:**

www.orthoinfo.aaos.org

Spine Health

www.spine-health.com

Pain Management

www.painaction.com

Wishing You a Healthy Recovery

In the months after your surgery, you will gradually move toward greater independence in all your activities. Continuing to exercise will help you build stamina and endurance. You may find it challenging at times. Sometimes you may need to find a new way to do things. As you recover from your surgery, try to be active and stay healthy. Keep your weight at a level that is appropriate for your height and body type. Adding pounds can put extra stress on your body and your surgery. As your muscles get stronger, it is important to stick with a regular exercise program to maintain total body fitness. No one is too old to exercise. If you have questions on how to keep active and stay healthy, talk to your primary care physician, surgeon, physician assistant, nurse practitioner, nurse, physical therapist, occupational therapist or case manager.

We hope this Guide has answered many of your questions about spine surgery and what to expect after surgery. We believe that the most satisfied patients are those who are well informed. If you have any other questions, please do not hesitate to contact your surgeon.

Thank you for entrusting your care to the orthopaedic spine surgeons at Massachusetts General Hospital. Best wishes for success and continued health.

Steps to complete *before* your surgery

- Read the information from your surgeon’s office. Call the office if you have any questions.
- Schedule appointments with other doctors (like a cardiologist or PCP) if advised by your surgeon.
- Prepare for your PPE Phone Call by gathering your health information including:
 - Allergies
 - Medications
 - Implanted devices
 - Medical history
- Complete blood work, tests, and other doctor visits. You can do this at MGH - Main Campus or with your healthcare provider.
 - At Mass General’s Boston campus, go to the 2nd floor of the Wang Building for blood work, MRSA/MSSA nasal swab and EKGs.
 - On weekends, go to the Medical Walk-In Unit (1st floor, Wang Building)

Hours:	Monday	6:00am-6:00pm
	Tues/Wed/Thursday	6:00am-6:30pm
	Friday	6:00am-5:00pm
	Saturday & Sunday	9:30am-3:30pm:
- Prepare your after-surgery arrangements:
 - Prepare your living space
 - Ensure prescriptions for usual medications are filled prior to your surgery
 - Stock up on prepared foods and groceries prior to your surgery
 - Arrange rides from the hospital
- Follow instructions for the day of surgery as advised by your surgeon.

Note: If necessary, any post-operative recovery like physical therapy, home care, or skilled nursing facility will be arranged by your healthcare team.

