

Spine Center at Beth Israel Deaconess Medical Center

Shapiro Clinical Center, Second Floor 330 Brookline Avenue, Boston, MA 02215 617-754-9000 spinecenter@bidmc.harvard.edu

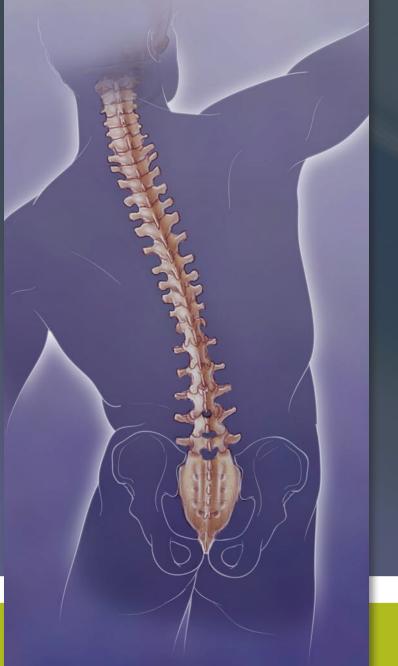
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ALL ABOUT YOUR •

Spine Surgery

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(L-R) Dr. McGuire, Orthopaedic Spine Surgeon, Dr. Papavassiliou, Neurological Spine Surgeon, and Dr. Gilligan, Pain Management Specialist, lead our team, reflecting true integration of their specialties.

Dear Patient,

THANK YOU for entrusting us to perform your spine surgery. We're grateful you chose the Spine Center at Beth Israel Deaconess Medical Center (BIDMC) and confident you made the right decision.

We've put together the following detailed information to help ensure the best possible experience and outcome for you. This packet explains what to expect and how to prepare before your spine surgery, the day of your surgery, and during your recovery. After surgery and before you leave the hospital, you'll receive personalized instructions from your dedicated medical team.

Our website, **bidmc.org/spinecenter**, is another great resource for you. In our *For Patients* section, check out *Having Surgery at the Spine Center*.

Additional important information about your surgery is in the materials we've included in the front pocket of this packet. Please read those, too. We've also provided a notepad in the back pocket, and we encourage you to write down any questions you might have for your medical team.

Please contact your surgeon's office with any questions by calling the Spine Center at **617-754-9000**, or email **spinecenter@bidmc.harvard.edu**. On behalf of our talented and dedicated team, thank you again for choosing the Spine Center at BIDMC for your care.

Sincerely,

Christopher Gilligan, MD, MBA Co-Director, Spine Center

Kevin J. McGuire, MD, MS Co-Director, Spine Center Efstathios (Steve) Papavassiliou, MD Co-Director, Spine Center

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In addition to the following pages, please remember to read the important materials about your surgery included in the front pocket.

Before Your Spine Surgery

Now that you made the decision to have the spine surgery your surgeon recommended, there are some key details to take care of and keep in mind before the procedure. We've included additional important information in the front pocket of this packet, including *Preparing for Your Surgery*. Please read these materials, too.

Your Surgery Date

Within five business days after you've told us your decision to have spine surgery, a surgical scheduler will contact you to discuss the date of your surgery. If you have not been contacted within five business days, please call the Spine Center at 617-754-9000.

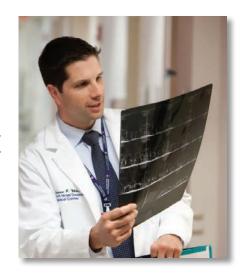
Pre-Admission Interview

Our surgical scheduler will also arrange an on-site interview for you at BIDMC, usually at least one to two weeks before your surgery date. We'll need you to come to BIDMC so you can meet with our nursing and anesthesia staff, and we can perform any necessary blood work, examinations, screenings, or tests. We'll also ask you about your health history, and you'll receive additional information about your surgery. This appointment may take as long as four hours, depending on what you need.

You might want to write down any questions you have and bring it with you that day. Please bring with you a list of all the medications you take, how often you take them and the proper dosage.

Unless you are told otherwise, your interview will take place in the Pre-Admission Testing (PAT) suite, in the Stoneman Building, Suite 122, on the medical center's East Campus. East Campus at BIDMC is the same complex of medical buildings in which the Spine Center is located. West Campus Clinical Center, where your upcoming surgery will take place, is on the opposite side of Brookline Avenue. We've provided maps on the following pages that highlight the locations at BIDMC you'll need to find on each campus and the most convenient parking lots. In the front pocket, we've included a map of East and West Campus, also designed especially for our spine surgery patients.

Andrew P. White, MD, Orthopaedic Spine Surgeon, interprets his patient's results.

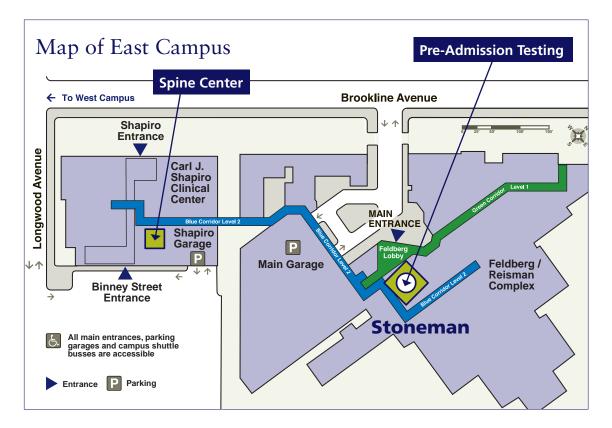


Map of East Campus

Below is a map of the East Campus, where your pre-admission interview will take place. For a map of West Campus, where your surgery will take place, go to page 6.



Your pre-admission interview will take place at: **Pre-Admission Testing (PAT)** suite, Stoneman Building, Suite 122 (first floor) at East Campus, 330 Brookline Avenue, Boston, Massachusetts.



Directions

For driving directions to BIDMC, please call 617-667-3000. Another option is to visit Patient and Visitor Information at bidmc.org.

Parking Information for East Campus

Self-parking is available in the Main Garage, and the entrance is on Brookline Avenue. Another parking option is the Shapiro Clinical Center Garage, entrance on Binney Street, off Longwood Avenue. However, the Main Garage is the closest location to the Stoneman Building, where your pre-admission interview will take place. Parking is discounted after a certain time period. To receive the discount, show your parking ticket to the reception staff in any of the main lobbies before you leave. Call 617-667-3035 for the most up-to-date information on parking garage locations, hours and rates.

Insurance Authorization

Contact your insurance carrier as soon as possible to let them know you will be having surgery and find out if you need a referral from your primary care provider. We will ensure that we do have proper authorization from your insurance carrier prior to surgery.

Worker's Compensation

If you would like your surgery to be covered by worker's compensation, please be sure to discuss this with the surgical scheduler. The process of obtaining authorization for worker's compensation can sometimes take several weeks and must be complete before your surgery can be scheduled. Therefore, the surgical scheduler will explain what steps need to be taken to get authorization and coordinate your surgery date on receiving the approval.

Work Note or Disability Paperwork

Please let the surgical scheduler know as soon as possible if you need a "work note" or disability paperwork as a result of your upcoming surgery. Because of the number of patients we care for each week, it takes our office up to 10 business days to complete these types of forms. If we receive them well in advance of your surgery, we will do our best to ensure that they are returned to you in a timely fashion.

Physical Therapy Before Surgery

Many patients are involved in physical therapy prior to surgery. Please discuss with your surgeon whether you should continue to perform these exercises in the period leading up to surgery.

Medications Before Surgery

We will work closely with you to make sure the medicines you take before and after your surgery are right for you. It's also very important that you read the brochure, Preparing for Your Surgery, with its insert, Medication Safety Before and After Surgery, found in the front pocket. You may be asked to stop or change some of your routine medications before your surgery. Do NOT stop or change any of your medicine unless you are told to do so. Make a list of everything you take or may take – prescription and nonprescription medicines, vitamins, herbs and supplements – including the dosage of each item and how often you take it. Please remember to bring that list to your pre-admission interview and with you the day of your surgery.

Emotional Support

We understand this may be a challenging time for you as you think about and plan for your upcoming surgery. Some may even feel a variety of mixed emotions as they anticipate surgery. If you are feeling this way, we encourage you to talk about it with someone close to you and trustworthy, or you may want to consider speaking with a therapist. A good way to get a recommendation for a therapist is to contact your insurance carrier or your primary care provider.

What to Bring to the Hospital

In general, we request that you pack very little for your stay here. Please bring any equipment you typically use at home such as a sleep apnea machine, brace, or surgical girdle. There is no need to bring in walking aides, such as a walker or a cane, because we have them available for use in the hospital. Make sure you wear comfortable clothing the day of surgery and pack another set of clean, loose comfortable clothing for the day you leave. Please leave any valuables at home. BIDMC cannot be responsible for valuables.

The Night Before Surgery

It's very important that you do not eat or drink anything after midnight. This includes water, coffee, gum, hard candy and mints. It's okay to brush your teeth as long as you don't swallow any water. If you don't follow this, your surgery will be canceled.

Plan to arrive an hour and a half before your scheduled surgery time. Please allow plenty of time for the traffic you may encounter on the way into BIDMC.

Preoperative Showering Instructions

You'll need to shower the night before and the morning of surgery with a special antiseptic soap called chlorhexidine gluconate (CHG), which you should receive at your pre-admission interview. Please follow the detailed directions on how to use this soap. They are outlined in *Preoperative Showering Instructions*, included in the front pocket.

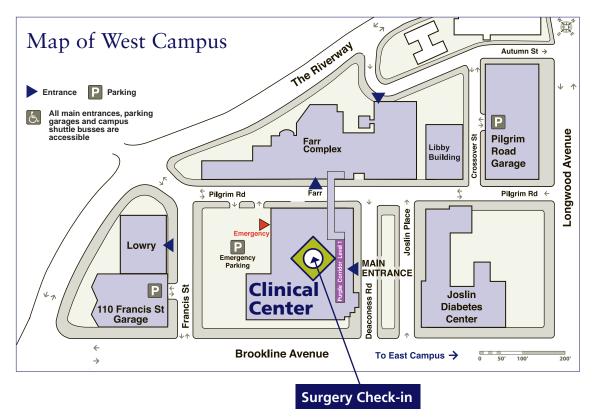
The Day of Your Spine Surgery

On the day of your surgery, please remember the following:

- → Do not eat or drink anything, and, if you are a smoker, do not smoke.
- Follow the directions provided in *Preoperative Showering Instructions*, and shower with the special antiseptic soap.
- Do not wear any makeup, body lotion, deodorants, powders, contact lenses, or jewelry.
- → Wear loose comfortable clothing and bring clean clothes for when you leave.
- → Plan to arrive an hour and a half before your scheduled surgery time.

Map of West Campus

Check-in for spine surgery is in the lobby at West Campus Clinical Center, 1 Deaconess Road, Boston, Massachusetts.



Directions

For driving directions to BIDMC, please call 617-667-3000. Another option is to visit Patient and Visitor Information at bidmc.org.

Parking Information for West Campus

You have a few options for parking. For the most up-to-date information about parking options, hours, and rates, please call 617-667-3035. Parking is discounted after a certain time period. To receive the discount, show your parking ticket to the reception staff in any of the main lobbies before you leave.

- **Valet Parking** is available at the entrance of West Campus Clinical Center from 7:30 am 7 pm, Monday-Friday.
- **Self-parking** is available in the Pilgrim Road Garage. The entrance to the garage is on Crossover Street, and can be reached by either Pilgrim Road or Autumn Street.
- In addition, if you don't want to walk outside after you park, and you can navigate stairs, another option for **self-parking** is the Lowry Medical Office Building Garage on Francis Street. This garage is connected via a basement tunnel to the West Campus Clinical Center.

Checking In

Please go to the information desk in the lobby of the West Campus Clinical Center at 1 Deaconess Road. A service ambassador at the desk will check you in for surgery and assign you a pager. When it is time to proceed to our operating suites, a service ambassador will escort you.

Information for Family and Friends

A family member or friend may come with you. Waiting space is limited so we ask that only one or two people accompany you. Once you have gone into surgery, your family or friend may wait in the designated waiting area.

There are also several convenient places to eat, including the East and West Campus Cafeterias. Longwood Galleria has a food court with many choices and is just across the street.

If your family or friend plans on leaving the hospital, the nurse in the preoperative area will place his or her cell phone number on your chart. Your surgeon will call when the operation is over. A beeper will be provided for those who do not have cell phones.

While you are in surgery, your family can receive general information from the Surgical Liaison Service, Monday through Friday, 9 am - 8 pm. To reach someone from this service, please call 617-754-3111.

Jeffrey Arle, MD, PhD, FAANS, Neurological Spine Surgeon, speaks with his patient before surgery in the preoperative area.



Recovering From Your Spine Surgery

Everyone heals at his or her own pace. Try not to compare yourself to others who have had similar surgeries. The following information will be helpful to understand the healing process.

After your surgery, you will receive additional detailed information from your spine team that is specifically tailored to you. If you have questions or don't understand something about your operation, please call the Spine Center at 617-754-9000. Someone will get back to you as soon as possible. For chest pain, shortness of breath, or any other emergency, call 911.

How You May Feel

You will experience some acute or sharp pain after surgery that is related to the procedure you have undergone. This is different from the pain you may have been experiencing before surgery.

For most patients, the pain from surgery is worse during the first 48-72 hours. Surgeons and nurses often call this period the "hump;" they know this is part of a patient's path to recovery. Keep this in mind as you are recovering, and don't get discouraged if your pain seems to be increasing during the first few days after surgery.

After 72 hours, your pain should start to decrease. You may have some additional pain right around your incision.

In addition, you may experience the following:

- You may feel weak or "washed out" for up to six weeks. You might want to nap often.
- You may have a sore throat or difficulty swallowing. Try eating soft foods until the trouble with swallowing improves.
- You might have trouble concentrating or difficulty sleeping. You might feel somewhat depressed. Please consider speaking with a trusted friend, family member or a professional if you are feeling depressed.
- You could have a poor appetite for a while. Food may seem unappealing.

These are normal reactions to any surgery, and they should go away in a short time. If they do not, contact your surgeon at 617-754-9000.

Your Surgical Incision

The dressing over your incision may be removed 48 hours after your surgery, unless your surgeon has told you otherwise. Do not use any ointments on it, unless you were advised to do so. Over the next 6 to 12 months, your incision will fade and become less prominent.

In the meantime, here is what to expect.

- Your incision may be slightly red. This is normal.
- The area around your incision will be swollen.

- You may have thin paper strips ("steri-strips") across your incision that will fall off on their own.
- If you have sutures (stitches) or staples, you will need to set up an appointment to have them removed 7 to 14 days after surgery, depending on your surgeon. If you are seeing your surgeon during this timeframe, your surgeon can remove them. Otherwise, you may have this done at your primary care doctor's office, or you may book an additional appointment with your surgeon's office for suture removal.

Pain Management and Medications

Your most important job after surgery is to learn how to balance pain management with activity and rest. You will get out of bed and begin walking your first day after surgery with the assist of the nursing team. Your aim is to steadily increase your activity, which will help you avoid complications such as blood clots, pneumonia, pressure sores, or infections.

Either too much or too little pain medicine can interfere with this goal. If you take too much, you will not be able to be as active as you should be because of the side effect of sedation. If you take too little, your pain is likely to prevent you from moving.

In many ways, the pain response is your body's way of reminding you to take things at a slower pace while you recover. On the other hand, we know that it is very important for you to steadily increase your activity, even if you are in some pain.

Pain Management in the Hospital

Right after surgery, pain is controlled with methods such as intravenous (IV) medication, epidural medication (medication into the spine), or through injections (shots). Your care team will help you work toward the important goals of increasing your activity level while switching to oral medications to manage your pain. The goal is to have you only on oral pain medications prior to discharge.

Pain Management at Home

Please use the following information/guidelines to help manage your pain.

- You will be given a prescription for narcotic pain medicine. In some cases, you may
 be given an antibiotic prescription, as well. Be sure to take all medicines exactly as
 prescribed. Do not take any additional over-the-counter pain medication unless your
 surgeon says it is okay.
- Take pain medicine on a regular basis, such as every four hours or every six hours. Be sure you are taking pain medicine before going to sleep at night so that you can get the rest you need. Don't wait until the pain is really severe to take medicine. It will not work as well and it will impact your ability to move.
- Time your medicine and activity sessions such as walking so that you can steadily increase your activity. For example, take your pain medicine so that it is working well during the time that you plan to be out walking.

- Over time, you will want to start to decrease your use of prescription pain medicine. As
 you feel your pain decreasing, try taking doses farther apart (for example, move from
 every four hours to every six). If you were taking two pain pills, try one and see how it
 goes. Don't decrease too quickly, but try to start the process as soon as you feel ready.
- Plan ahead for refills. Narcotic pain medicine prescriptions cannot be called in to your pharmacy. Prescriptions must be mailed to you or picked up at the doctor's office. If you are starting to run low, please call your doctor at least two business days before you will run out of medicine.
- Although everyone is different, most patients are off of narcotic pain medicine a few weeks after surgery, depending on the surgery. As a general rule, your surgeon's office will provide refills for prescription pain medicine for 4-12 weeks following surgery. In the unusual event that you need prescription pain medicine for a longer period, you will likely be referred to your primary care physician or to a pain specialist for help with longer-term management of your pain.

Medications

As noted, you will be given a prescription for pain medicine and possibly an antibiotic prescription, too. Be sure to take all medicines exactly as directed. Here are additional critical guidelines to follow that will help your recovery.

- Blood thinners It is very important that you know when to go back to taking any blood thinners you may have been on before surgery, such as aspirin, Plavix, or Coumadin. This is especially important if you are taking medicines to thin your blood to prevent blood clots or stroke. If you are not sure whether to take your blood thinners, please ask your surgeon or the doctor who told you to take them.
- Pain medicine Please check with your surgeon before adding or switching to non-prescription pain medicines. For some surgeries, certain non-prescription pain medicines should not be taken. Also, adding a medicine like acetaminophen (Tylenol) if you are still taking prescription pain medicine could be dangerous as your prescription medicine may have acetaminophen in it. (Acetaminophen is also included in other overthe-counter pain medicines and in many cold/flu remedies).
- Medicine for constipation You may also be given a stool softener. Constipation is a common side effect of medicine such as Percocet or codeine. Taking a stool softener (such as Colace, or docusate, 1 capsule) once or twice a day can help prevent constipation; if needed, you may also use a gentle laxative (such as Milk of Magnesia, 1 tablespoon twice a day). You can get both of these medicines without a prescription. Increasing your fluid intake may also help.
- Other medicine You should go back to taking any other medicine you were taking before your surgery, unless you have been told differently. If you have any questions about what medicine to take or not to take, call your surgeon at the Spine Center, 617-754-9000.

Rehabilitation After Surgery

While recovering from your surgery, you may require physical or occupational therapy. This process often starts in the hospital. A physical or occupational therapist may evaluate you and provide recommendations to help increase your mobility, as well as to assist with discharge planning. They will determine if you require further physical or occupational therapy services at discharge. Typically, you will follow up with an outpatient physical or occupational therapist approximately 2 to 6 weeks after your surgery, depending on your surgeon's preference and the healing process. BIDMC offers outpatient services at BIDHC-Chelsea, BIDHC-Lexington, and BIDHC-Chestnut Hill. To set up an appointment, you may call Rehabilitation Services at BIDMC at 617-754-9100.

In some cases, you may need more intensive physical therapy, or there might be concern that you could have difficulty caring for yourself safely at home. A physical therapist and/or an occupational therapist, along with your surgeon and a case manager, will determine if you need to be transferred to a rehabilitation facility before going home. If this is the next step for you, your inpatient team will work with your insurance carrier and make sure you are placed in an appropriate rehabilitation facility.

Going Home

The amount of time you will be in the hospital depends on a number of factors, including the specific operation you are having and your general state of health. Please ask your surgeon how long you can expect to be in the hospital. Although discharge times vary for a variety of reasons, we aim to discharge patients between 10 am and noon.

Activity Guidelines

The following are guidelines. For further information, please watch our video about spine surgery at bidmc.org/spinecenter, in the *For Patients* section. When you leave the hospital, you will be given additional, detailed instructions on care after surgery, specifically tailored to you. As always, if you have any questions, please call the Spine Center at 617-754-9000.

Brace — If you have been given a brace or collar, wear it as instructed by your surgeon.

Showering and Swimming — Please check with your surgeon about when it will be okay to shower after your surgery, and also about when it will be okay to swim or take a tub bath.

Lifting — For a number of weeks after surgery you should not lift, pull, push, or carry anything greater than 10 pounds. Ask your surgeon when you will be able to resume these activities. Avoid activities that cause you to twist or bend your spine.

Sitting — Avoid long car rides as a passenger. If you must be in a car for an extended period, allow plenty of time to stop for stretch breaks.

If you've had lower back surgery, you should try not to sit for prolonged periods for the first several weeks. When you are sitting, you will be most comfortable in a supportive chair that has armrests and a firm back. You may put your feet up on a footstool or another low flat object.

Walking — Daily walking is the best exercise. Try to increase your distance a little each day. Walk around the house at first, then move to short walks outside (weather permitting).

Driving — Please note that you will not be able to drive for a while after your surgery.

Do not drive if any of the following are true:

- You are taking narcotic pain medicine.
- You are wearing a cervical collar or back brace, or if you cannot move your neck and head normally.
- You are not comfortable in a sitting position for 30 minutes at a time.
- Your pain is impacting your ability to respond normally in an emergency.

Sexual Activity — You may resume sexual activity as soon as you feel comfortable doing so. For many patients, this is about three weeks after surgery.

Work and Travel — Please ask your surgeon when you may go back to work or when you may travel.

Follow-up care

You should have an appointment with your surgeon between two and six weeks following your surgery (depending on your surgeon and your operation). Your inpatient team will work with you and tell you what is needed. If this appointment has not yet been scheduled, please call the Spine Center at 617-754-9000. Also, let your primary care physician know that you have had surgery.

Please remember, everyone heals at his or her own pace. Contact us anytime at 617-754-9000, if you have any questions or concerns. Thank you again for trusting the Spine Center at Beth Israel Deaconess Medical Center with your care.

Warning Signs

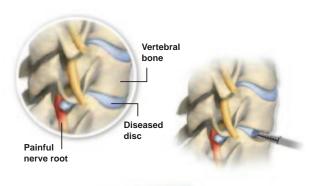
We expect you to have a successful recovery. However, there are warning signs that are very important for you to recognize.

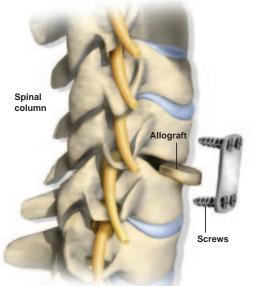
- For chest pain and/or discomfort, shortness of breath, pain/swelling in the lower legs, or any other emergency, **call 911**.
- Please call your surgeon at the **Spine Center, 617-754-9000,** if you develop any of the following:
 - Temperature of 101 degrees or higher
 - Sudden, severe increase in pain that is not relieved with pain medicine
 - Redness around the incision that is spreading
 - Increased swelling around the incision
 - The edges of the incision start to separate
 - Any drainage coming from your incision
 - Any change in sensation in your arms or legs
 - You fall



Most Common Types of Spine Surgery We Perform

Anterior Cervical Discectomy and Fusion







Overview

This surgery removes a herniated or diseased disc and relieves neck and radiating arm pain caused by parts of the disc pressing on nerve roots.

Incision Created

The surgeon performs this procedure through an incision on the front of the neck.

Disc Removed

The diseased or damaged disc is removed. As pressure is removed from the pinched nerve roots, pain is relieved.

Graft Inserted

The space above and below the removed disc is cleared and prepared for a bone graft. The graft is placed between the vertebrae.

Metal Plate Attached

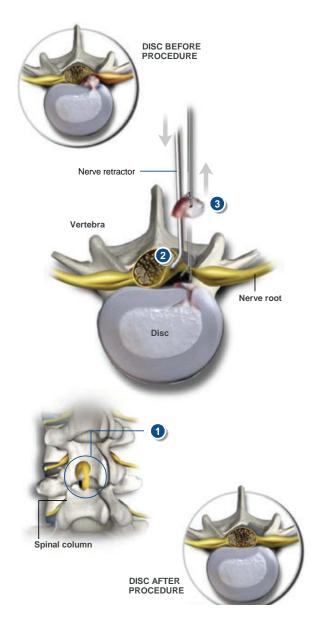
The surgeon may screw a small metal plate over the area to hold the bones in place while the vertebrae heal.

End of Procedure

During the healing process, the bone graft knits together with the vertebrae above and below to form a new bone mass called a fusion.

View the video animations at bidmc.org/spinecenter. This content adapted from swarminteractive.com. Used with permission. Unauthorized duplication of this material is strictly forbidden.

Lumbar Disc Microsurgery



Overview

This minimally invasive technique is used to remove the herniated portion of a vertebral disc. It is 95% to 98% effective in eliminating leg pain (sciatica) caused by nerve root compression. The procedure is performed through a small incision on the back.

Lamina Opened

After creating a small incision directly over the herniated disc, the surgeon creates a small window in the lamina (the bone covering the spinal canal). The pinched nerve root and the herniated disc can be seen through this opening.

Spinal Nerve Moved

The surgeon uses a nerve retractor to gently move the spinal nerve away from the herniated disc.

Herniation Removed

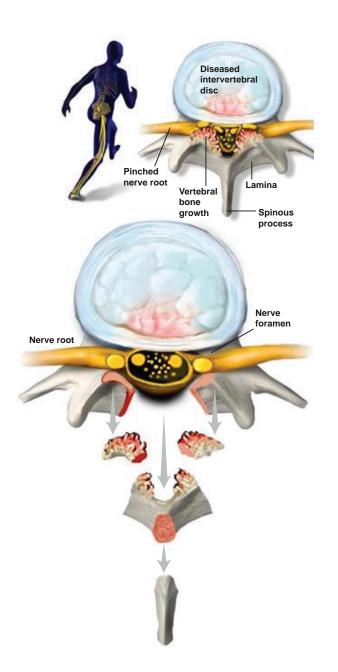
The herniated portion of the disc is removed, eliminating pressure on the nerve root. Only the damaged portion of the disc is removed, leaving any healthy disc material to perform its function as a cushion between the vertebrae.

End of Procedure

The tools are removed, and the spinal nerve returns to its normal position. The incision is closed.

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Lumbar Laminectomy



Overview

This procedure is performed through an incision on the lower back. The surgeon removes a section of bone, called the lamina, from one or more vertebrae. This relieves pressure on the nerve roots caused by stenosis (a narrowing of the spinal canal).

Removing the Spinous Process

First, the surgeon removes the spinous process (the portion of the vertebra that protrudes furthest from the back of the spine). These are the bones that you feel when you touch the middle portion of your lower back.

Removing the Lamina

The surgeon removes the lamina (the portion of the vertebra that covers the nerve roots). Removing the damaged lamina opens up the spinal canal, taking pressure off the nerves.

Clearing Bone Fragments

There still may be some pinching from pressure within the area where the nerve root exits the spine, called the nerve foramen. The surgeon clears away any bone fragments that are pressing on the nerve roots.

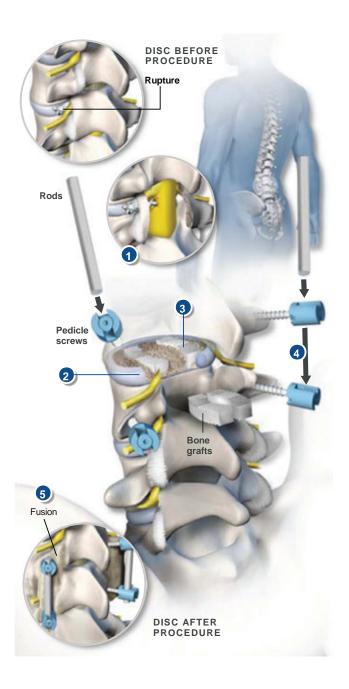
End of Procedure

The spinal canal is now clear of any bone fragments, which relieves pressure from the nerve roots. The surgeon checks the nerve roots to make sure they are no longer being pinched.

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Posterior Lumbar Interbody Fusion (PLIF)



Overview

PLIF is generally used to treat back or leg pain caused by degenerative disc disease. The surgeon will stabilize the spine by fusing vertebrae together with bone graft material.

Incision Made

The procedure is performed through a three to six inch incision in the back.

Disc Accessed

Parts of the vertebral bone need to be removed to get access to the disc.

Disc Partially Removed

The damaged disc is partially removed. Some of the disc wall is left behind to help contain the bone graft material.

Bone Grafts Placed

Bone grafts are placed in the empty disc space, realigning the vertebral bones. This also lifts pressure from pinched nerve roots. The area may also be filled with morselized bone.

Additional Supports Added

The surgeon may implant a series of screws and rods to the back of the spine for additional support. Bone graft is also placed along the sides of the spine.

End of Procedure

The morselized bone graft will grow through and around the implants, forming a bone bridge that connects the vertebral bodies above and below. This solid bone bridge is called a fusion.

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