Dear Patient,

Your decision to have a spinal injection is a very important step in your treatment. We appreciate you choosing the Spine Center at Beth Israel Deaconess Medical Center (BIDMC) to perform your procedure. Our team is committed to relieving your pain and other symptoms while providing you with the best possible experience in a compassionate environment. Your physician and care team members that may include resident doctors, nurses, clinical students and all other staff value your decision and are confident you made the right choice.

We’ve put together the following detailed information to help ensure the best possible experience and outcome for you. Please read the following information which will help you prepare and know what to expect before your injection, the day of your injection and after your injection. You will receive additional information on the actual day of the procedure. For more information about spinal injections, visit bidmc.org/spinalinjection.

We ask that you read through the appointment sheet in the front pocket. Your spine specialist has provided information that is personalized for you next to the boxes that are checked. Please carefully follow those instructions, or we may need to reschedule your procedure.

Typically, your injection procedure is scheduled after your office visit due to managed care/third party insurance requirements. It’s critical that you let us know as soon as possible about any health-related changes that have taken place since your last visit and before your procedure. Unfortunately, some changes may result in your injection being rescheduled, too. Warning: Reasons to Reschedule Your Injection (page 4) further explains these situations.

Thank you again for entrusting us with your care. We hope our comprehensive patient education materials help you feel well prepared for your procedure. We wish you the best of health. If you have any questions or concerns, please contact your spine specialist at the number listed on their business card or email spinecenter@bidmc.harvard.edu. On behalf of our talented and dedicated team, thank you again for choosing the Spine Center at BIDMC.

Sincerely,

Thomas T. Simopoulos, MD
Chief, Division of Pain Medicine
Co-Director, Spine Center
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For more information about spinal injections, visit [bidmc.org/spinalinjection](http://bidmc.org/spinalinjection)
Before Your Spinal Injection

Please read the following to help ensure the best possible experience and outcome for your procedure. Contact your spine specialist with any questions.

Medications

Routine Medications  Read your personalized appointment sheet, in the front pocket, for any instructions about changes in your medicines that may be needed before your injection. Unless you have been told otherwise, continue to take all your medicines as usual.

Supplements  If you are taking supplements including Vitamin E, ginkgo, garlic, ginseng, fish oil, or omega-3, let us know. You may be asked to stop taking them before your procedure.

Please keep in mind it is very important that the specialist who will perform your injection knows about every medicine you’re taking, or plan to take, up until the day of your procedure. Even when we have this information in your record, speaking with us to confirm everything you are taking is important for your safety. This includes (but is not limited to) prescription medicines, nonprescription medicines, vitamins, herbs, and supplements.

Diabetic Patients

If you take any medicine for diabetes and you will not be eating and drinking normally on the day of your procedure, talk with the physician who manages your diabetes about whether you need to adjust your insulin or other diabetes medicine the night before and/or the morning of your procedure. Note: If you have diabetes and your procedure includes a steroid injection, you will need to monitor your blood sugar more carefully in the two weeks following your procedure.

Secure a Ride Home

You may need someone to take you home after your injection, depending on what you are having done. Your appointment sheet (in the front pocket) has information about whether or not you may go home on your own. Please note that if you are going to have sedation, you will need someone to wait on-site while you have the procedure, and then take you home – you cannot arrange to be picked up.

Will It Be Painful?

Some patients might be concerned about pain the actual injection may cause. Most injections are performed without sedation. For injections without sedation, a topical anesthetic will be applied to the site where the injection will occur. This will numb the area, and patients should not experience pain during the procedure. You might feel slightly uncomfortable depending on your position on the procedure table.

Steroids Used In Injections

If your procedure will involve steroids, you may find it helpful to know we use “anti-inflammatory” steroids that are synthetic versions of what your body makes naturally, only more potent. Some typical brand names are Depo-Medrol, Kenalog, and Decadron.

Insurance Requirements

You have been evaluated by one of our Spine specialists and you have made the decision to have a spinal injection. Spinal injections are an effective treatment approach. Sometimes there is a waiting period between the time you saw your Spine specialist in the office and when the injection will occur. Some insurance companies have authorization guidelines and documentation requirements. Our knowledgeable staff work on meeting these requirements.
## Warning: REASONS TO RESCHEDULE YOUR INJECTION

It's very important that you let us know right away if any of the following happens after your appointment with your spine specialist and before your upcoming injection. Your procedure may need to be rescheduled.

- In the days leading up to your injection, you have an immunization, begin taking antibiotics, or get a fever, cold, flu, or other infection.
- You become pregnant.
- You have had a change in your medical condition that requires you to start taking a new medicine (prescription or nonprescription).
- You take any kind of steroid (injection or by mouth).
- You have had recent surgery or have an upcoming surgery scheduled.
- You have new or worsening numbness or tingling in your legs or arms.
- You have problems controlling your bowels or your urine.

If your injection is postponed and you’ve already stopped taking your medicine as directed, contact your specialist with any questions about restarting. To change or cancel your appointment, please call at least 48 hours in advance of your scheduled appointment. Please contact us if you have any questions or concerns. Our contact information is located on the front inside pocket.
The Day of Your Spinal Injection

We appreciate your on-time arrival. Traffic congestion and parking can make your trip longer than expected. Please allow plenty of travel time. If you arrive late for your appointment, we might need to reschedule it to accommodate other patients that day.

Eating and Drinking

Your personalized appointment sheet (in the front pocket) will have information on whether you need to fast before your procedure. For some procedures, you may be asked not to eat or drink for a number of hours before your procedure. For others, you may eat and drink normally.

Medications

Take routine morning medication as usual, unless you have received special instructions as stated in your appointment sheet. If you will be receiving sedation, take your medication with only a small sip of water.

Allowing time for a blood test on the day of the procedure

If you will need to have a blood test your procedure, plan to arrive at the collection station at least 1 1/2 hours (90 minutes) before your procedure appointment. Please make sure you know where to go. See the map in your folder. Your procedure may be canceled if you do not have a blood test that your doctor prescribed.

What to Wear

Before the injection, we’ll clean your skin with a special solution that might stain light-colored clothing. Please keep that in mind when selecting what to wear to the procedure.

What to Bring

Bring any medical images if done outside BIDMC (X-ray films and CT or MRI scans), or other medical records you have related to your procedure.

What Not to Bring

Please arrange to leave cash, jewelry, purse, cell phone, or credit cards at home or with your escort. Please be aware that BIDMC cannot be responsible for valuable items and cannot reimburse you for the cost of lost items.
Where We Perform Injections

We perform spinal injections in three convenient locations. Your procedure will take place at the William Arnold-Carol A. Warfield, MD, Pain Center at Beth Israel Deaconess Medical Center, One Brookline Place, Suite 105, Brookline, Beth Israel Deaconess Hospital–Milton 199 Reedsdale Road, Milton, or at Beth Israel Deaconess Hospital–Needham, 148 Chestnut Street, Needham. If you have any questions about where your procedure will be performed, please contact your spine specialist’s office or email paincallcenter@bidmc.harvard.edu

Arnold-Warfield Pain Center
One Brookline Place, Suite 105, Brookline, MA 02445

Contact Information
To schedule injections, follow-up office visits, ask questions, and cancel appointments, please call your spine specialist’s office. The phone number can be found on the business card located on the front pocket.

Parking
There is a self-parking garage at One Brookline Place with a fee for parking.

Public Transportation
One Brookline Place is on the MBTA Green Line (Brookline Village stop).

Checking In
Please check in at the front desk in the Pain Center, Suite 105. The main number for Pain clinic is 617-278-8000.

Information for Family and Friends
There is a comfortable waiting room within the suite.

Tips
If you have an escort, he or she can let you out at the entrance and proceed to park in the garage.
Contact Information
To schedule injections, follow-up office visits, ask questions and cancel appointments, please call us at 617-313-1073.

Parking
Parking and valet parking is free in the hospital lots. Valet or park your car and enter the hospital through the Reedsdale entrance.

Checking In
Please check in for your procedure on the ground floor of the hospital, in the Center for Specialty Care. The Center is located across from the cafeteria. Once you have checked in, a staff member will escort you to where the spinal injection will take place.

Information for Family and Friends
There is a comfortable waiting area with a television in the Center for Specialty Care. Your family or friend may wait here for you while you have your procedure, or may go to the cafeteria conveniently located across the hall.

Tips
If you need a wheelchair, please ask the front desk at the Reedsdale entrance and a volunteer will be happy to assist you.
Contact Information
To scheduled injections, follow up office visits, ask questions and cancel appointments, please call 617-278-8000.

Parking
Parking and valet parking is free in the hospital lots. Enter the main parking lot from Chestnut Street, valet or park your car and enter the hospital through the main entrance.

Checking In
Going in through the main entrance, please check in for your procedure on the ground floor of the hospital, South Building, Lincoln Street side. Once you have checked in, a staff member will escort you to where the spinal injection will take place.

Information for Family and Friends
There is a reception area near the check in location where they can wait for you while you have your procedure. You will be escorted back to this area when the procedure is finished.

Tips
If you need a wheelchair, please ask at the front desk and a volunteer will be happy to assist you.
After Your Spinal Injection

We hope the following information helps you know what to expect after your injection. Please follow the instructions below, and if you have any questions, call your specialist. If you were sedated for your procedure, you will receive additional instructions related to the sedating medicines you received.

How You May Feel

The response to procedures varies by person.

• Patients may feel discomfort or pain at the injection site and/or may experience facial flushing (redness). These side effects should disappear over a few days.

• A small number of patients may temporarily experience an increase in their usual pain or numbness; their symptoms get worse before they get better. Read Pain Control and Medications, below, for suggestions.

• Some patients have a dramatic decrease in pain right after the procedure that is also temporary. It is related to the anesthetic medicines given during the procedure, and lasts for several hours.

• If you were given steroids, it takes at least several days (up to 10 days) for the steroid injection to begin to work. So when your anesthetic wears off, your pain may get worse before the steroid “kicks in” and it gets better.

• Certain procedures may cause a temporary change of sensation, or weakness, in a part of your body for a very brief time. For this reason:
  • Check with the specialist who performed your injection about when you may drive following your procedure. Some patients are asked not to drive for the rest of the day.
  • This temporary side effect can increase your risk of falling for a few hours after the procedure, so make sure you have someone with you to help you stay safe.

Contact your specialist if you have any questions about how you feel. If you are experiencing chest pain or difficulty breathing, or you need immediate attention for any reason, call 911 to be taken to the nearest emergency room.

Pain Control and Medications

• Unless your specialist has told you otherwise, continue taking all your regular medications. If you were instructed to stop taking some of your regular medications before your procedure, be sure you understand when you should go back to taking them. If you have any questions, please call your specialist.

• If needed, you may take your pain medicine(s) after your procedure. If you have questions about your pain medicine, talk with your pain management specialist.

• You may find it helpful to use ice packs over the area of your injection for 20 minutes at a time, four times a day, especially during the first two days.

• If you have a new type of pain, a sudden increase in pain, or if your pain is very severe, please call the specialist who performed your injection right away for advice.
Activity Guidelines

- Check with the specialist who performed your injection about when it’s safe for you to drive. Some patients are asked not to drive for the rest of the day.
- Over the next several days, go back to your usual activities as much as you can, based on your level of discomfort. “Usual” activity means the level of activity that you were comfortable with immediately prior to the injection. Gradually, over the next few weeks to a month, as your symptoms improve, you can expect to be able to increase your activity, but you should not engage in vigorous activity too soon.
- Most people can go back to an exercise program or their regular physical therapy within one week of their injection.
- If you have any questions about activity, please ask the specialist who performed your injection.

Diabetic Patients

If you have diabetes, and your procedure included a steroid injection, you will need to monitor your blood sugar more carefully in the two weeks following your procedure.

Next Steps

Your doctor will let you know the next step(s) following this procedure. The step(s) will also be noted on the appointment sheet you will receive.

Please keep track of your pain in the days and weeks after your injection. You may want to keep a log where you record your symptoms. By sharing detailed information about your pain and pain relief, you can help us to determine what further treatments, if any, are best.

Contact Information

Regular Clinic Hours
To reach your spine specialist’s office, you can call 617-617-278-8000 or email paincallcenter@bidmc.harvard.edu.

After Hours
Call 617-278-8000, and follow instructions. A spine specialist is on call to discuss any concerns you might have.

Warning Signs:

Contact the spine specialist who performed your injection right away if you note any of the following.

If you are experiencing chest pain or difficulty breathing, or you need immediate attention for any reason, call 911 to be taken to the nearest emergency room.

- A new type of headache, such as a headache that goes away if you lie flat, but comes back if you sit or stand
- Fever, chills, night sweats, or a feeling of being ill
- Changes in your bowel or bladder (urine) function, including new incontinence or loss of bowel or bladder control
- Any new weakness, numbness, or tingling in the arm, leg, or groin after the procedure
- Any new severe pain
- Weakness that is getting worse instead of better
- Redness, swelling, or pain around the injection site
- You develop a new rash
- Any problem that you are concerned about
Types of Spinal Injections We Perform

On the following pages we’ve included diagrams of spinal injections we perform. Our website is another great resource for spine health information for patients. Please visit us at bidmc.org/spinecenter or go directly to bidmc.org/spinalinjection.

Lumbar Epidural Steroid Injection

**Overview**
This injection procedure is performed to relieve low back and radiating leg pain. Steroid medicine can reduce the swelling and inflammation caused by spinal conditions.

**Fluoroscopic guidance**
The patient lies face down. A cushion under the stomach area provides comfort and flexes the back. In this position, the spine opens and allows for easier access to the epidural space. A fluoroscope assists the physician in locating the appropriate lumbar vertebra and nerve root. A local anesthetic is used to numb the skin.

**Tissue anesthetized**
All the tissue down to the surface of the lamina portion of the lumbar vertebra bone is anesthetized.

**Larger needle inserted**
The physician slides a thicker needle through the anesthetized track.

**Needle guided to epidural space**
Using the fluoroscope for guidance, the physician slides the needle toward the epidural space.

**Contrast dye injected**
A contrast solution is injected. The physician uses the fluoroscope to see the relevant (spine) anatomy and to confirm the correct location of the needle tip.

**Medicine(s) injected**
A local anesthetic and/or steroid is injected into the epidural space, bathing and soothing the painful nerve root.

**End of procedure**
The needle is removed, and a small bandage is applied to cover the tiny needle surface wound. In some cases, it may be necessary to repeat the procedure to get the full benefit of the medicine. Many patients get significant relief from only one or two injections.

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

Overview
This injection relieves pain in the neck, shoulders, and arms caused by a pinched nerve (or nerves) in the cervical spine. Conditions such as herniated discs, spinal stenosis, or radiculopathy can compress nerves, causing inflammation and pain. The medicine injected helps decrease the swelling of nerves.

The procedure is performed with the patient lying down. A region of skin and tissue of the neck is numbed with a local anesthetic delivered through a small needle.

Needle inserted
Using X-ray guidance (also called fluoroscopy), the physician guides a larger needle to the painful area of the neck. The needle is inserted into the epidural space, which is the region through which spinal nerves travel.

Contrast dye injected
Contrast dye is injected into the space to make sure the needle is properly positioned near the irritated nerve or nerves.

Medicine(s) injected
A local anesthetic and/or steroid is injected into the epidural space. The steroid is an anti-inflammatory medicine that is absorbed by inflamed nerves to decrease swelling and relieve pressure.

End of procedure
The needle is removed and a small bandage is applied. The patient goes to a recovery room and is given food and drink and discharged with post-treatment instructions. Some patients may need only one injection, but it may take two or three injections.

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Lumbar Transforaminal Epidural Steroid Injection

Overview
This injection procedure is performed to relieve low back and radiating leg pain. The steroid medicine can reduce the swelling and inflammation caused by spinal conditions such as spinal stenosis, radiculopathy, sciatica, and herniated discs.

Vertebra and nerve root located
The patient lies face down. A cushion is placed under the stomach area to provide comfort and flex the back. This position causes the spine to open, allowing for easier access to the epidural space. The physician uses a fluoroscope to locate the appropriate lumbar vertebra and nerve root, and a local anesthetic numbs the skin.

Tissue anesthetized
All the tissue down to the surface of the vertebral transverse process is anesthetized.

Needle inserted
The physician slides a thin, bent needle with a slightly curved point through the anesthetized track. With the aid of the fluoroscope, the physician carefully guides the needle into the foraminal space near the nerve root.

Contrast dye injected
The physician injects a contrast solution and uses the fluoroscope to see the relevant (spine) anatomy and confirm the correct location of the needle tip.

Medicine(s) injected
A local anesthetic and/or steroid is injected into the foraminal epidural space, bathing and soothing the painful nerve root.

End of procedure
The needle is removed, and a small bandage is used to cover the tiny needle surface wound. In some cases it may be necessary to repeat the procedure more than once.

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Facet Joint Injection/Medial Branch Block

Overview
Each vertebra in the spine is connected to the vertebra above and below it by facet joints, which are located on both sides of the rear of the spine. A facet joint block can be both diagnostic and therapeutic for back or neck pain. A facet joint block injection can confirm whether the facet joints are indeed the source of pain and can help relieve the pain and inflammation.

Sometimes, a medial branch nerve block is performed instead of a facet joint injection, using local anesthetic. This is done to temporarily interrupt the pain signal from the facet joints that is carried by the small medial branch nerves. If pain is reduced with this intervention, a procedure called radiofrequency neurotomy may be performed later (see page 14).

Skin numbed
A small area of skin is numbed with a local anesthetic injection.

Medicine(s) injected
A local anesthetic and/or steroid is delivered to the joint through a thin needle. Depending on the location of pain, one or more injections may be administered. If the pain subsides after the injection, this suggests that the facet joint (or joints) injected were the cause of pain.

End of procedure
Back or neck pain may disappear immediately after a successful block. However, once the numbing effect of the anesthetic wears off, pain may return. It usually takes several days for the steroid medicine to reduce inflammation and alleviate pain. Effects may last several days or several weeks.

View the video animations at bidmc.org/spinalinjections. This content adapted from swarminteractive.com. Used with permission. Unauthorized duplication of this material is strictly forbidden.
Overview
This minimally-invasive procedure treats spine fractures caused by osteoporosis. It is designed to provide rapid back pain relief and help straighten the spine.

Instruments Inserted
Through a half-inch incision, small instruments are placed into the fractured vertebral body to create a working channel.

IBT Inserted
The KyphX® Inflatable Bone Tamp (IBT) is then placed into the fracture.

Cavity Created
The device is carefully inflated, creating a cavity inside the vertebral body.

Balloon Deflated
The balloon is deflated, leaving a cavity in the vertebral body.

Fracture Stabilized
The cavity is filled with bone cement to stabilize the fracture. Once filled, the incision is closed.

End of Procedure
With the process completed, an “internal cast” is now in place. This stabilizes the vertebral body and provides rapid mobility and pain relief. It also restores vertebral body height, reducing spinal deformity.

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Radiofrequency Neurotomy

Overview
This minimally invasive procedure uses a radiofrequency probe to reduce or eliminate pain signals from nerves in the facet joints.

Preparation
The patient is positioned and local anesthetic is injected. A needle-like tube called a cannula is inserted and guided by fluoroscopic imaging to the irritated medial branch nerves of the painful facet joint.

Positioning the electrode
A radiofrequency electrode is inserted through the cannula. The physician tests and verifies the electrode’s position by administering an electrical pulse.

Nerve treated
Heat from the electrode cauterizes the irritated nerve. This disrupts its ability to communicate with the brain, blocking the pain signals. The physician may treat multiple nerves if needed.

End of procedure
After the procedure, the electrode and cannula are removed. The site is bandaged and the patient will be able to go home the same day as the procedure.

View the video animations at bidmc.org/spinalinjections. This content adapted from swarminteractive.com. Used with permission. Unauthorized duplication of this material is strictly forbidden.
**Overview**
This injection procedure is performed to relieve pain caused by arthritis in the sacroiliac joint where the spine and pelvis bone meet. The steroid medicine can reduce swelling and inflammation in the joint.

**Sacroiliac joint located**
The patient lies face down. A cushion is placed under the stomach for comfort and to arch the back. The physician uses fluoroscopic guidance to find the sacroiliac joint.

**Anesthetic injected**
A local anesthetic numbs the skin and all the tissue down to the surface of the sacroiliac joint.

**Needle inserted**
The physician advances a needle through the anesthetized track and into the sacroiliac joint.

**Medicine(s) injected**
A local anesthetic and/or steroid is injected into the sacroiliac joint.

**End of procedure**
The needle is removed and a small bandage is used to cover the tiny surface wound.

View the video animations at [bidmc.org/spinalinjections](http://bidmc.org/spinalinjections). This content adapted from swarminteractive.com. Used with permission. Unauthorized duplication of this material is strictly forbidden.
**Joint or Bursa Injection**

**Overview**
Joints are areas of the body where two bones come together. Your body’s ability to move depends on the function of your joints. For example, the knee joint allows movement of the lower leg; the shoulder joint allows movement of the upper arm. Joints that move in this way, as well as the tendons and muscles around them, are subject to wear and tear over the years. This can lead to inflammation and pain in the joint.

The body has a number of natural “cushions” – called bursae – around many of the moveable joints. These are small sacs that are sometimes filled with fluid. They help to decrease the friction caused by the joint motion. Over time, these too can become inflamed, making them work less well and leading to additional joint pain.

If you are having pain in a joint, your doctor may decide to inject the joint and/or bursae with a steroid and/or a numbing medicine to decrease the pain and inflammation.

**What will happen during the injection?**
Your doctor will use a local anesthetic/numbing medicine, similar to novocaine, to numb the skin around the area to be injected. Then, steroid medicine and/or numbing medicine will be injected into the area.

**Fluoroscopic (x-ray) guidance**
Depending on the location of your injection and other factors, the doctor may use a special type of x-ray called fluoroscopy to make sure the injection goes into the right place. The fluoroscopy produces a series of x-ray pictures that the doctor uses to guide the needle to an exact location. In most cases, contrast dye/solution is placed through the needle into the area being treated. This is to help the doctor see the area even better. Your doctor will let you know if contrast dye is being recommended for your procedure. If you are allergic to IV dye or contrast dye, be sure to let us know. In most cases, the procedure can be done without dye.

**Needle guided to the joint space**
Once the area being treated is numb, the doctor will place a needle into the joint space.

**Medicines injected**
The steroid medicine and/or numbing medicine is then injected into the area, bathing and soothing the painful joint.

**End of procedure**
The needle is removed and a small bandage is placed on the area. Typically, patients having this procedure are in the center for about 30 minutes.

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Trigger Point Injection

**Overview**
Trigger points are small areas in the body, sometimes felt as “knots” under the skin, which can cause pain with movement. Often, the areas are painful when they are pressed. Although doctors don’t completely understand how trigger points form, they may develop due to long-standing muscle spasms and/or inflammation caused by injury or stress.

Trigger point injections can help relieve the pain in one of two ways. Anesthetic medicine numbs the pain, which may provide immediate relief and also may help break the cycle of spasms, leading to longer-term pain relief. In some cases, a steroid medicine is also given, which helps reduce inflammation in the area, further reducing pain.

**Procedure**
You may be sitting or lying down for the procedure, depending on the area being injected. Using a small needle, the doctor will give injections into the trigger point area.

Because the needles used are very small, and because the injection includes an anesthetic (similar to novocaine), most patients report only mild discomfort from the trigger point injections.

Usually, there are several injections for each treatment. The exact number of injections varies. Your doctor will tell you how many injections to expect.

**Length of procedure**
Typically, patients having this procedure are in the center for about 30 minutes.

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