



# **A Guide to Spine Injection Procedures**

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# A Guide to Spine Injection Procedures

This guide to spine injection procedures answers many commonly asked questions and helps you to prepare for your spine procedure.

**Please pay special attention to any indented phrases, as they are important for making sure your injection procedure goes smoothly.**

**Please note: If there is any chance of pregnancy, you cannot have any X-ray guided spinal procedure.**

## ***What is a spinal injection? Why am I getting one? How do you know where to put it?***

The spinal injection you will receive is also sometimes known as a block. Following your office consultation, we will determine if a spine injection procedure is an appropriate test or treatment for you. We make this determination after careful consideration of your history and physical examination results along with MRI or CT scans, or EMG studies. We will consider all the available information before recommending the type and location of an injection.

## ***Can all spine problems be treated with injection procedures?***

**No.** The injections we perform are not appropriate for everyone. It is possible that your condition cannot be managed non-surgically. Consultation with a spine surgeon will be scheduled if surgery is your best treatment option. For some patients, consultation with a neurologist or pain management specialist may be appropriate. Our goal is to use the experience and talent of our team members to provide care in a diagnosis-specific and comprehensive fashion. We will not recommend diagnostic or therapeutic interventions that are unlikely to benefit our patients.

## ***What medications may be given during a spine injection procedure?***

One or more of three different substances are infused during an injection. These include:

1. A local anesthetic to numb the skin and the underlying pain source before injection
2. A contrast agent or dye to outline the target structure before administering medication
3. A corticosteroid to reduce the inflammation associated with the structure causing pain

**You MUST report known allergies to any of these agents to a member of our team immediately:**

- Local anesthetics, contrast dye, corticosteroids
- Latex or Iodine

**Before your injection, you may require pre-medication to prevent serious allergic reaction. A member of our team will supply you with the appropriate pre-procedure prescriptions and instructions.**

### ***How do you deliver the medication to the correct location?***

The injections we perform at the URM Center use state-of-the-art technology including fluoroscopy (X-ray guidance) to deliver medication precisely and safely to the structure(s) in your spine we believe to be the source of your symptoms. Fluoroscopy enables us to see your anatomy during the injection procedure and ensure accurate needle placement and precise delivery of medication.

### ***Do you always use fluoroscopy?***

**Yes.** It is our goal to introduce medication to the specific location of your pain source. The benefits of using fluoroscopy include an improved chance of positive results and a reduced risk for complications. It is possible to perform generalized epidural injections without the use of X-ray guidance (blind). However, we do not perform these procedures because they are non-specific and are usually performed for patients with generalized pain that does not originate at a specific spinal structure. In addition, well-regarded medical studies have demonstrated that, even in experienced hands, blind spinal injections may result in medication placed at the wrong site 25–40% of the time.

### ***How are injection procedures classified?***

All spine injection procedures fall into one of two general categories:

- 1. Diagnostic (Test) Blocks**
- 2. Therapeutic (Treatment) Blocks**

**Diagnostic (Test) Blocks** contain a contrast agent and local anesthetic. If we cannot clearly identify your pain source after gathering your history, physical examination, spine images, and EMG studies, we may use a diagnostic block. We perform these tests to locate the structure in your spine that is causing your pain. In order to be effective, the block must be performed while you are experiencing your typical discomfort. This means you must avoid the use of pain medications before the block for approximately 12–24 hours.

If you are pain-free on the day of your scheduled block, please call in advance to cancel and reschedule. We will try to provide the flexibility needed to reschedule you on relatively short notice when your typical pain returns.

During the block procedure, we will place a local anesthetic at the site most likely responsible for your pain. Approximately 10–30 minutes after the injection, a member of our team will assess you. They will ask you to perform any activities that typically cause pain. Then, your pre- and post-block pain drawings and pain ratings will be compared. At that time, we will determine if your pain generator has been identified.

It is important to remember the diagnostic blocks are tests. They are not intended to cure your problem. Once the local anesthetic has worn off, in 1–3 hours, your typical symptoms will return. It is possible that multiple diagnostic injections will be required to locate the source of your symptoms. If you have a positive response, meaning your pre-injection pain was at least 80% relieved after trying to cause pain after the block, we will schedule the appropriate therapeutic (treatment) injection. If needed, we will schedule another diagnostic injection at the site of the next most likely pain source or a follow-up consultation.

**Therapeutic (Treatment) Blocks** differ from diagnostic injections because a corticosteroid is given with the contrast agent and local anesthetic. The steroids we use are not the kind used by bodybuilders or athletes. They do not build muscles. The purpose of the corticosteroid is to reduce local swelling and inflammation, stabilize electrical activity in nerve cells, and reduce pain. We place a minimal amount of corticosteroid specifically at the site of the suspected problem during injection procedures.

**The steroid effect begins anywhere from 4–6 hours to one week after your injection procedure. It provides a gradual steady reduction in your pain that, in certain types of spine problems, can provide long-term success and eliminate the need for spine surgery.**

### ***How long will my injection last?***

The goals of spine injection procedures are to cure possible structure-specific inflammation, reduce your pain, and eliminate the need for more invasive spine procedures or spine surgery. In the non-surgical treatment of spinal disorders, structure-specific injections are commonly performed with a spine-specific rehabilitation program. Rehabilitation is designed to improve the strength, flexibility, and endurance of the muscles that support the area and reduce pressure from the treated portion of the spine.

Ultimately, you will be graduated to an independent spine home exercise program. Following this program during and after your injection procedure is a key to long-term success. Recently, medical studies on patients with herniated discs or spinal stenosis with associated radiculopathy or sciatica (pain radiating down the leg) have been completed. After five years, these studies showed the interventions we perform at the UPMC Spine Center can prevent the need for surgery.

### ***Is the injection “masking” my symptoms or problem?***

**No.** The **therapeutic** spinal injection procedures infuse a dose of corticosteroid specifically and precisely on the target spinal structure to reduce any potential inflammation, swelling, and pain originating from the spinal structure. The injection will only relieve your pain if it is a result of inflammation, swelling, or edema, which the injection can cure. Reducing inflammation can provide the body with the time and environment needed to heal spinal structural abnormalities and conditions.

### ***How should I prepare for my spinal injection procedure?***

- 1. If there is any chance of pregnancy, you cannot have any X-ray guided spinal procedure.**
- 2. All patients MUST have an available driver on the day of their procedure. Failure to bring a driver will most likely result in the rescheduling of your procedure.**
- 3. Please wear loose clothing (e.g. sweat pants for lumbar or low back injections and tank tops or halter tops for cervical or neck injections).**
- 4. Please do not wear any jewelry that may interfere with the X-ray for neck injections (e.g. necklaces, medium and large sized earrings, rope chains, etc.)**

### ***Should I continue taking my medications before my injection?***

Many medications may be continued on any injection day. There are some exceptions:

1. **Anticoagulants such as Coumadin (Warfarin)** will be adjusted in cooperation with your primary care physician or cardiologist before your spinal procedure.
2. **Lovenox and SubQHeparin** must not be taken for 12 hours before any spinal procedure.
3. **Aspirin or Plavix** must be discontinued for 7–10 days before any cervical (neck) or thoracic injection procedure, discogram, IDET, or nucleoplasty procedure.
4. **Non-steroidal anti-inflammatory agents (NSAIDS)** such as Motrin, Advil, ibuprofen, Alleve, ketoprofen, relafen, indocin, indomethacin, toradol, meloxicam, Celebrex, naproxen, or Naprosyn should not be taken for 3 days before any cervical or thoracic injection procedure.
5. **Other Pain Medications** not listed above may be continued as prescribed for any *therapeutic* (treatment) injection. However, they must be stopped for 12 hours before any *diagnostic* (test) injection.

### ***When should I arrive? How long will my procedure take?***

**For injection procedures**, please arrive 15 minutes before your appointment time. Plan to spend a total of 1 hour at our office. **For discograms, IDET or percutaneous intradiscal decompression procedures**, please arrive 45 minutes before your appointment time. Plan to spend 2–3 hours in our office. These times may vary depending on the needs of all our patients on a particular day. We will do our best to remain on schedule and keep you informed of our daily progress.

Following your injection, you will be assessed and monitored for approximately 30 minutes. Upon your departure, you will be provided with additional written instructions.

**You MUST have someone drive you home following any injection procedure. Failure to bring a driver will most likely result in the rescheduling of your procedure.**

### ***What are the possible side effects and complications of spine procedures?***

The most common side effect from injection procedures is a transient increase in pain for the first 24–72 hours. This happens because substances are injected around an inflamed structure. This is normal and you should not be alarmed. Your symptoms will gradually diminish during the days following the procedure. You may also experience tenderness at the needle insertion site. If you experience this problem, use light pressure with crushed ice wrapped in a towel to the affected area for fifteen minutes every 3–4 hours.

Possible minor, temporary, and treatable side effects include post-injection muscle soreness or redness, temporary lightheadedness, dizziness, or fainting, temporary headache, fever, nausea or vomiting, temporary increased blood sugar or blood pressure, and minor allergic reaction, such as a rash. These side effects should not result in your cancellation of a subsequent injection.

As with any invasive procedure, major complications are possible. These include severe allergic reaction, anaphylaxis, excessive bleeding, permanent nerve damage, permanent increased pain, dural puncture, seizure, stroke, cardiovascular collapse, and death. These major complications are extremely rare in the hands of experienced interventional spine specialists. The physicians at the URMCI Spine Center have each performed thousands of spine injection procedures. If you have concerns or questions regarding any potential complications, please discuss them with your physician.

***For what reason should I cancel a scheduled injection procedure?***

You should cancel any scheduled injection if you experience greater than 90% pain relief that lasts up to the day before your next scheduled injection. If you continue to have greater than 90% relief up to the day before a scheduled injection, please call to speak with a member of our team. It is likely that we will reschedule you to see the physician for a follow-up consultation.

***For what reasons should I contact my physician after an injection?***

- A temperature of greater than 100 °F that is not improving
- Loss of bowel or bladder control or retention of urine
- Pain that is severe and worsening
- Loss or worsening of strength in any extremity
- Headache in the standing or sitting position that is relieved upon lying down

***Who should I contact and what numbers can I call with questions before or after my procedure or injection?***

**In case of an urgent issue or questions between 8 AM and 4:30 PM Monday through Friday, call your doctor’s office.**

Dr. Everett	Doreen	585-341-9258
Dr. Orsini	Shannon	585-341-7642
Dr. Patel	Kristy	585-341-9237
Dr. Speech	Margaret	585-341-9238
Procedure Scheduler	Nancy	585-341-9186
On-call physician		585-327-2955

**Before 8 AM or after 4:30 PM, on weekends or holidays, please call the on-call physician.**

***Notes on Medication Refills:***

1. Medication refills can only be prescribed by your primary spine specialist during regular office hours.
2. Prescription refills will NOT be prescribed by the on-call physician, after hours, weekends, or holidays.

**Please plan medication refill requests accordingly.**

**MEDICINE *of* THE HIGHEST ORDER**