

UNIVERSITY OF ROCHESTER SPINE CENTER
DEPARTMENT OF ORTHOPAEDIC SURGERY
DEPARTMENT OF PHYSICAL MEDICINE & REHABILITATION
UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE
STRONG MEMORIAL HEALTH SYSTEM

A Guide to Spine Injection Procedures

The following booklet is a guide to spine injection procedures and will address many commonly asked questions as well as prepare you for your spine procedure.

PLEASE PAY SPECIAL ATTENTION TO ANY BOLDFACED PHRASES AS THEY ARE INTEGRAL IN MAKING SURE THAT YOUR INJECTION PROCEDURE GOES SMOOTHLY

PLEASE NOTE THAT 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, AND 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, it will be determined if a spine injection procedure is an appropriate test or treatment for you. This determination is made after a careful consideration of your history, physical examination findings, radiographic images, and/or electrodiagnostic studies. All of this data is considered in determining your candidacy for an injection procedure as well as the *type and location* of the injection procedure performed. **The injections performed at the University of Rochester Spine Center are performed with state-of-the-art technology and utilize fluoroscopy (x-ray guidance) to deliver medication precisely and safely to the structure(s) in your spine thought to be the source of your symptoms. This enables the physician to visualize your anatomy during the injection procedure and ensure accurate needle placement and precise delivery of medication. It is our goal with each injection 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 as they are non-specific and are usually performed for patients with generalized pain of non-focal spinal sources. In addition, well-regarded medical studies have demonstrated that, even in experienced hands, blind (non x-ray guided) spinal injections may result in medication placed at the wrong site 25-40% of the time.**

CAN ALL SPINE PROBLEMS BE TREATED WITH A PROCEDURE/INJECTION?

NO. The injections we perform are not appropriate for everyone. It is possible that your condition cannot be managed non-surgically and consultation with a spine surgeon would then be recommended if surgery were the best treatment option. In other cases, consultation with a neurologist or pain management specialist may be appropriate. Our goal is to utilize the 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?

Generally, one or more of three different substances are injected during an injection. These include a local anesthetic (to numb both the skin prior to injection and the underlying pain source), a contrast agent or dye (to outline the target structure prior to administering medication), and steroid (to reduce the inflammation associated with the causing the pain).

If you have a known allergic reaction to contrast dye, local anesthetics, steroid, latex, seafood, shellfish, or iodine, you will require pre-medications as an allergy protocol prior to your injection procedure. A member of our team will supply you with the appropriate pre-procedure prescriptions and instructions. You MUST report any known allergies to any of these agents to a member of our team immediately.

HOW ARE INJECTION PROCEDURE CLASSIFIED?

A variety of injections are performed each of which is directed toward the structure in your spine thought to be responsible for your pain. Our clinical impressions will be carefully reviewed with you following your initial evaluation.

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

1. Diagnostic (Test) Blocks - a contrast agent and local anesthetic are utilized.
2. Therapeutic (Treatment) Blocks - a contrast agent, local anesthetic, *and a steroid* are utilized.

Diagnostic (Test) Injections are utilized when, even after considering the information gathered through your history, physical examination, spine images, and electrodiagnostic studies, your pain source is still not clearly identified. It is a test used in an attempt to clarify which structure in your spine is the cause of the pain. In order to be effective, the diagnostic injection must be performed while you are experiencing your typical discomfort. This will require you to avoid the use of pain medications prior to the diagnostic injection procedure for approximately 12-24 hours. If you are pain free on the day of your scheduled diagnostic injections, please call in advance to cancel and reschedule. We will try to provide the flexibility required in rescheduling you on a relatively short notice upon return of your typical pain complaints. During the diagnostic injection procedure, a local anesthetic agent will be placed at the site most likely responsible for your pain. Approximately 10-30 minutes after the injection a member of our team will assess you. At that time you will be asked to perform any activities that typically provoke your pain and your pre- and post- diagnostic (test) injection pain drawings and pain ratings will be compared. A determination will then be made if your pain generator has been identified. It is important to remember that diagnostic blocks are tests. They are not intended to cure your problem. Once the local anesthetic has worn off, after about 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 with attempts at provocation following your diagnostic injection, you will then be scheduled for the appropriate therapeutic (treatment) injection. Otherwise, another diagnostic (test) injection or a follow-up consultation will be scheduled at the site of the next most likely pain source.

Therapeutic (Treatment) Injections differ from diagnostic injections in that a corticosteroid agent is administered. The steroids used in these injections do not build muscles and are not the kind of steroid used by bodybuilders or athletes. The purpose of the steroid is to reduce local swelling and inflammation, stabilize cell membranes, and diminish pain-generating activity. When administered during a fluoroscopically guided injection procedure, a minimal amount of steroid can be placed specifically at the site of suspected pathology. **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 obviate the need for spine surgery.**

HOW LONG DOES MY INJECTION LAST?

The goal of spine injection procedures is to cure a possible structure-specific biochemical (inflammatory) response, and, consequently, reduce your pain and obviate the need for more invasive spine procedures and/or spine surgery. In the non-surgical treatment of spinal disorders, structure-specific injections are commonly performed in conjunction with a spine specific rehabilitation program that will improve the strength, flexibility, and endurance of the muscles that support the structure involved and reduce pressure from the affected portion of the spine. Ultimately, you will be graduated to an independent spine home exercise program and your compliance in this program during and after your injection procedures is a key

to obtaining long-term success. The current medical literature suggests that the interventions performed at the spine center for patients with herniated discs and/or spinal stenosis with associated radiculopathy (pain radiating down the extremity (-ies)) can prevent the need surgery long-term (average follow-up 23 months).

IS THE INJECTION “MASKING” MY SYMPTOMS OR PROBLEM?

NO. The *therapeutic* spinal injection procedures performed infuse a dose of corticosteroid specifically and precisely on the target spinal structure to resolve any potential inflammation, swelling and pain emanating from that spinal structure. In addition, the resolution of the potential inflammatory response can provide the body with the time and/or environment it requires to heal certain spinal structural abnormalities and conditions.

HOW SHOULD I PREPARE FOR MY SPINAL INJECTION PROCEDURE?

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. Please wear loose clothing (e.g. sweat pants for lumbar/low back injections and tank tops/halter top for cervical/neck) and 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...). As for diet, you should not eat any solid foods for 6 hours prior to any spine procedure.

In general, your medications may be continued on any injection day. There are some exceptions:

1. **Anticoagulants such as Coumadin (Warfarin)** must not be taken for five days prior to ANY spinal procedure. This medication adjustment will be coordinated with the assistance and approval of your primary care physician.
2. **Lovenox and SubQ Heparin** must not be taken for 12 hours prior to ANY spinal injection procedure.
3. **Glucophage and other oral blood sugar control medications** are to be held on the day of and 48 hours after your injection procedure. This will need to be arranged with your primary care physician, as steroid indications will often elevate blood glucose levels in both insulin dependent and non-insulin dependent diabetics.
4. **Aspirin** - Those patients on aspirin regimens will be requested to stop taking their medication for 7 to 10 days prior to any CERVICAL/NECK injection procedures as well as for ANY discograms, IDET or nucleoplasty procedures.
5. **Nonsteroidal anti-inflammatory agents (NSAIDS)**, such as motrin, advil, ibuprofen, alleve, ketoprofen, relafen, indocin, indomethacin, toradol, vioxx, celebrex, bextra, mobic, naproxen, naprosyn, etc...) should not be taken for 3 days prior to any CERVICAL/NECK injection procedures as well as for ANY discograms, IDET or nucleoplasty procedures.
6. **Other Pain Medications**, other than those stated above, may be continued as prescribed for any *therapeutic (treatment)* injections, HOWEVER, they DO need to be stopped for 12 hours prior to any *diagnostic (test)* injection.

Please arrive approximately 15 minutes prior to your scheduled injection time and 45 minutes prior to discograms, IDET or nucleoplasty procedure times. You should anticipate a total time spent at our facility of 1 hour for an injection or 2-3 hours for discograms, IDET or nucleoplasty. Such times may vary depending on the particular daily schedule. 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 from the facility, 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 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 occurs 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. Should you experience this problem, utilizing light pressure with crushed ice wrapped in a towel to the affected area for fifteen minutes every 3-4 hours is often effective. Possible minor and transient/treatable side effects include post-injection muscle soreness/redness, transient lightheadedness/fainting, dizziness, post-injection muscle soreness/redness, transient headache, transient fever, nausea/vomiting, transient increased blood sugar, transient increased blood pressure and minor allergic reaction (e.g. rash).

The above side effects should not result in your cancellation of a subsequent injection. You should cancel any additional scheduled injections if you experience greater than 90% pain relief, which lasts up to the day prior to your next scheduled injection. In such an instance, you would contact us, speak with a member of our team, and likely be rescheduled to see the physician in a follow-up consultation.

In addition, 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. Our interventional spine practitioners have performed thousands of spine procedures without any of the aforementioned major complications. If you have any additional concerns or questions regarding the aforementioned or potential procedural complications, please review them with your physician.

FOR WHAT REASONS SHOULD I CONTACT MY PHYSICIAN AFTER AN INJECTION?

- A temperature of greater than 100 degrees that is not improving
- Loss of bowel or bladder control or retention of urine
- Pain which is severe and worsening
- Loss or worsening of motor function in any extremity (-ies)
- Headache in the standing or sitting position which is relieved upon lying down

WHO SHOULD I CONTACT AND WHAT NUMBERS CAN I CALL WITH QUESTIONS BEFORE OR AFTER MY PROCEDURE/INJECTIONS?

In case of an urgent issue or questions between 8 AM and 4:30 PM Monday through Friday, Dr. Patel's office can be reached at 341-9237/Dr. Everett's office can be reached at 341-9258 and Dr. Speach's office can be reached at 341-9235. If it is before 8 AM or after 4:30 PM, weekend, or holiday, please call 327-2955 for the on-call physician.

PLEASE NOTE – Any requests for medication refills can only be prescribed by your primary spine specialist during regular office hours. **Prescription refills will NOT be prescribed by the on-call physician** after hours, weekends or holidays. Please plan medication refill requests accordingly.