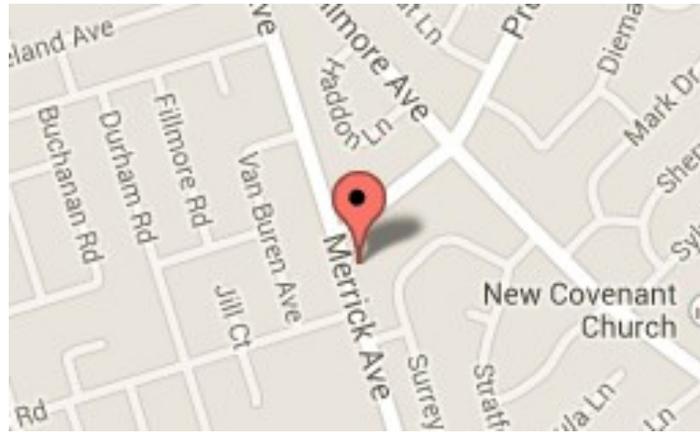




LONG ISLAND SPINE REHABILITATION MEDICINE

EAST MEADOW | GREAT NECK | HEWLETT | HUNTINGTON
LISPINEMED.COM

DIRECTIONS TO THE EAST MEADOW OFFICE



801 MERRICK AVENUE, EAST MEADOW, NEW YORK 11554
(516) 393-8941 PHONE | (516) 393-8870 FAX

Please note that our office is located on the corner of Merrick Ave and Prospect Ave. The parking lot to the building is located on Prospect Ave.

From the Long Island Expressway Eastbound (I-495 East)

- Take Exit 38 for Northern State Parkway East (towards Hauppauge).
- Take Exit 31A to Meadowbrook Parkway southbound (towards Jones Beach).
- Take Exit M5 for 24East towards Farmingdale (Hempstead Turnpike East).
- Merge onto Hempstead Turnpike, and stay in the right lane.
- Turn right at the first traffic light onto Merrick Avenue (southbound).
- Travel 1.5 miles on Merrick Ave. Stay to the right when the road forks.
- Make a left onto Prospect Ave., and then turn right into the parking lot.

From the Southern State Parkway

- Take Exit 24N (Merrick Ave. North) and merge onto Merrick Avenue.
- Turn right onto Prospect Avenue, and make your next right into the parking lot.

From the Meadowbrook Parkway

- Take Exit M5 for 24East towards Farmingdale (Hempstead Turnpike East).
- Merge onto Hempstead Turnpike, and stay in the right lane.
- Turn right at the first traffic light onto Merrick Avenue (southbound).
- Travel 1.5 miles on Merrick Ave. Stay to the right when the road forks.
- Make a left onto Prospect Ave., and then turn right into the parking lot.



LONG ISLAND SPINE

REHABILITATION MEDICINE

Medications to Stop Prior to Spinal Procedures

Certain medications will need to be held prior to your injection procedure once cleared by your physician.

**** All medication adjustments will be coordinated with the approval and assistance of your physician. ****

- 1. Blood thinners (Anticoagulants)** must be held accordingly prior to the injection day **unless otherwise instructed by your physician**. These medications are typically restarted shortly after the injection, usually on the evening following the procedure. These include but are **NOT** limited to:
 - Coumadin x 5 days (INR bloodwork is required **the day before** your procedure)
 - Eliquis x 2 days
 - Effient x 7 days
 - Aggrenox x 7 days
 - Lovenox x 12-24 hours
 - Plavix x 7 days
 - Pletal x 3 days
 - Pradaxa x 2-5 days
 - Ticlid x 5 days
 - Xarelto x 2 days
- 2. Metformin (Glucophage) and metformin containing medications** are to be held on the evening prior, day of and 48 hours after your injection procedure.
 - These medications include but are **not limited to**: metformin/Glucophage, Janumet, Invokamet, Glucovance, and Glumetz.
 - **** Clearance from your physician treating your diabetes will need to be obtained **prior** to your stopping this medication.** You should also monitor your blood sugars for 1-2 weeks post injection, as steroid injections will often elevate blood glucose levels in both insulin dependent and non-insulin dependent diabetics.
- 3. ASPIRIN and NSAIDs (anti-inflammatories):**
 - ***** Aspirin and NSAIDs DO NOT** need to be held for lumbar (lower back) or hip/knee injections.
 - **STOP ASPIRIN x 7 days and NSAIDs for 3 days** for injections in the neck.
 - **** Patient who need to take aspirin for a medical condition (such as heart disease or stroke) should not stop their aspirin until medically cleared by their cardiologist.**
 - Aspirin and oral NSAIDs are typically restarted shortly after the injection, usually on the evening following the procedure.
 - NSAIDs include but are not limited to: naproxen (Naprosyn, Aleve), ibuprofen (Advil, Motrin), Excedrin, meloxicam (Mobic), celecoxib (Celebrex), nabumetone (Relafen), and diclofenac (Voltaren).
- 4. Pain medications** should be held for 12-24 hours prior to a **diagnostic procedure ONLY** and NOT for therapeutic injections.



LONG ISLAND SPINE

REHABILITATION MEDICINE

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A GUIDE TO SPINAL INJECTION PROCEDURES

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INTRODUCTION

What is a spinal injection?

The injection you will receive is also known as a fluoroscopically guided selective spinal injection. Following your evaluation at Long Island Spine Rehabilitation Medicine, it will be determined if such an injection procedure is appropriate for you. This determination is made after a careful review of your history, physical examination findings, radiographic images, and electrodiagnostic studies. All of this information is considered in determining your candidacy for injection procedures.

Injections are performed under x-ray guidance, also known as fluoroscopy. This enables the physician to visualize your anatomy during the injection procedure and ensure accurate needle placement. 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 increased likelihood for positive results and a reduced risk for complications. Previous published studies have demonstrated that, even in experienced hands, spinal injections performed without fluoroscopy may result in medication not reaching the target in up to 25-40% of cases.

What medications are given during an injection procedure?

Generally, three substances are injected during the 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 a steroid (to reduce inflammation and the local pain generating activity).

You must report any known allergies to any of these agents to a member of our team

immediately. If your allergy is to the contrast agent, you may require an allergy protocol prior to your injection procedure. A member of our Long Island Spine Rehabilitation Medicine team will supply you with the appropriate pre-procedural prescriptions and instructions.

What are the different types of injection procedures?

A variety of injections are performed at our practice, and each is directed toward the structure in your spine believed to be responsible for your pain. Our clinical impressions in your case will be carefully reviewed with you following your initial evaluation. Injections fall into two general categories:

1. **Diagnostic:** only a contrast agent and local anesthetic are utilized.
2. **Therapeutic:** a contrast agent, local anesthetic, and *steroid* medications are utilized.

A **diagnostic injection** is 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 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 for approx. 12-24

hours prior to the diagnostic injection procedure. If you are pain free on the day of your scheduled diagnostic injection, please call in advance to reschedule. Upon return of your typical pain complaints, we can be flexible in rescheduling your appointment on relatively short notice. During the diagnostic injection procedure, a local anesthetic agent will be placed at the site which is suspected to be responsible for your pain. Approximately 20-30 minutes after the injection, you will be assessed by a member of our team. At that time, you will be asked to perform any activities which typically provoke your pain, and your pre-and post-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 injections are tests. They are not intended to treat your problem. Once the local anesthetic has worn off, after about 1 hour, your typical symptoms will return. In some cases, it is possible that additional diagnostic injections will be required. If you have a positive response, i.e. – your pain was at least 80% relieved after your first diagnostic injection, you will then be scheduled for the appropriate therapeutic injection at the same site. Otherwise, an additional diagnostic injection will be performed at the site of the next most likely pain source.

Therapeutic injections differ from diagnostic injections in that a corticosteroid agent is administered. The steroids utilized in these injections do not build muscles, and they are not the kind of steroid used by bodybuilders or athletes. The purpose of the steroid is to reduce local inflammation, stabilize membranes, and diminish local pain generating activity. When administered during a fluoroscopically guided injection procedure, the minimal amount of steroid can be placed specifically at the site of the suspected pathology. The steroid effect begins anywhere from 4-6 hours to one week after your injection procedure. It is intended to provide a gradual but steady reduction in your pain. It is not a quick fix. Typically, therapeutic injections are scheduled two weeks apart, and your progress is reviewed prior to scheduling a third.

Do I need to stop any medications before my procedure?

In general, your medications may be continued on your injection day. There are some exceptions, as noted below. See the last page of this booklet for further details.

1. **Blood thinners (Anticoagulants)**, such as Coumadin, Plavix, Effient, Pradaxa, Xarelto, Effient, and Lovenox, must be held accordingly prior to the injection day. These medications are typically restarted shortly after the injection, usually on the evening following the procedure. All medication adjustments will be coordinated with the approval and assistance of your physician. While some of these medications only need to be discontinued one or two days prior to the injection, others must be held for up to a week prior and, in the case of Coumadin, blood tests may be required to confirm that you are able to proceed with a spinal injection.
2. **Metformin (Glucophage) and metformin containing medications** (for example, Janumet, Glucovance) are to be held on the evening prior, day of, and 48 hours after your injection procedure. This will also need to be arranged with your primary care physician, as steroid injections will often elevate blood glucose levels in both insulin dependent and non-insulin dependent diabetics.
3. **Aspirin and NSAIDs (anti-inflammatories)**: Those patients on aspirin regimens may be requested to hold their medication for 7 days prior to the injection procedure. This is necessary in the case of cervical injections, but cardiac patients may remain on aspirin prior to a lumbar injection. In some instances, medical clearance will be obtained prior to an aspirin hold. Oral non-steroidal anti-inflammatory agents should be held for 2-3 days prior to an injection procedure whenever possible, but **this is required prior to a cervical injection**. Aspirin and oral non-steroidal anti-inflammatory agents are typically restarted shortly after the injection, usually on the evening following the procedure.
4. **Pain medication** should be held for 12-24 hours prior to a diagnostic **but not** prior to therapeutic injections. Additionally, pain medication and anti-anxiety agents can be prescribed for the injection day in an effort to maximize your comfort during your procedure.

What can I expect on the day of my procedure?

All patients will require an available driver on the day of their procedure to drive you home from the office following the injection.

If your procedure is scheduled for the morning, you may have a light breakfast such as toast and juice, but nothing heavy. For afternoon procedures, you may have a normal breakfast and a light lunch.

Please arrive approximately 10 minutes prior to your scheduled injection. You should anticipate a total time spent at our facility of approximately one hour. Such times may vary depending on the particular daily schedule. We will do our best to remain on schedule and to keep you informed of our daily progress.

After 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.

When should I contact the physician following an injection procedure?

- A temperature of greater than 100 degrees.
- Loss of bowel or bladder control.
- Pain which is severe and worsening.
- Loss of motor function or increased weakness in any extremity (-ies).
- Significant headache when standing or sitting that is fully relieved when lying down.

Are there potential complications?

The most common side effect from the procedure is a transient increase in pain for the first 24-72 hours. This occurs because fluid substances (i.e., medications) are introduced in close proximity to a structure which is already inflamed. You should not be alarmed by this. Such symptoms typically diminish gradually during the days following the procedure. You may also experience tenderness at the needle insertion site. Should you experience this problem, an ice pack applied to the area is often effective.

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 is sustained until the day prior to your next scheduled injection. In such an instance, you would contact the office, speak with a member of our team, and likely be rescheduled to see the physician in follow-up consultation.

In addition, as with any invasive procedure, more significant complications are possible but are considered rare. These include: lightheadedness, fainting, allergic reaction, dural puncture, infection, excessive bleeding, permanent nerve damage, seizure, cardiovascular collapse, and death. A recent published review of 5500 injection procedures identified four systemic adverse effects, each of which was self-limited. A retrospective review of 888 injection procedures performed at the University of Pennsylvania Spine Center identified eight short-term and no long-term complications. Two additional recent publications investigating the complications arising from fluoroscopically guided selective transforaminal cervical and lumbar injections describe no long-term complications in all patients followed. We must always respect the possibility of procedural complications, and if you have any additional concerns, please review them with a member the Long Island Spine Rehabilitation Medicine team.

It is important that you understand the difference between the steroids which may be utilized during your injection procedure.

To remain in compliance with current and evidence based treatment guidelines pertaining to lumbar and cervical transforaminal injections only:

All cervical transforaminal injections are performed utilizing a non-particulate steroid known as dexamethasone (Decadron).

All first time lumbar transforaminal injections are similarly performed with a non-particulate steroid known as dexamethasone (Decadron).

For those lumbar transforaminal patients who fail to respond to dexamethasone (Decadron) after the first injection, the decision, with your consent, may be made to switch to a potentially more potent and particulate steroid, either triamcinolone (Kenalog) or betamethasone (Celestone).

Studies do suggest a rare but increased complication profile from the use of particulate steroids. These include clotting of critical arteries which supply the spinal cord. Rare but devastating complications such as paralysis have been reported.

If a particulate steroid is to be used in your particular case, it is important that you understand that all safety precautions are available to us to minimize the likelihood of such an event. These include: the level of experience of your treating physician, the use of live fluoroscopy, meticulous procedural technique which incorporates the use of extension tubing to minimize needle movement, the use of a test dose of anesthetic and procedural pause to observe for any adverse response, and the use of digital subtraction angiography (DSA) when needed to better visualize any suspected blood vessels in the area.

Our physicians are always respectful, despite the rare incidence, of potential complications from any interventional procedure, even in the most experienced hands. To date, and after thousands of injections using both particulate and non-particulate steroids, no patient has suffered from a major complication.

Can all spine problems be treated with an injection procedure?

While spinal injections help a significant number of conditions, these injections are not appropriate for everyone. It is possible that your condition cannot be managed non-surgically. In this scenario, consultation with a spine surgeon might be recommended. In other cases, consultation with a neurologist or more chronic pain management specialist may be appropriate. Our goal at Long Island Spine Rehabilitation Medicine is to utilize the talents of physicians and colleagues to provide care in a diagnosis specific and comprehensive fashion. We will not recommend diagnostic or therapeutic measures which are unlikely to benefit our patients.

Comprehensive Rehabilitation Approach

The injections performed at Long Island Spine Rehabilitation Medicine are only a component of the overall care we offer. In the non-surgical treatment of spinal disorders, injections are often provided in conjunction with a spine specific rehabilitation program which is directed by a skilled physical therapist or along with complementary medicine treatments provided by one of our licensed acupuncturists or massage therapists. Our goal is to reduce your pain and enable you to fully participate in your prescribed rehabilitative therapies. By employing such a strategy, our chances of helping you heal and preventing future injury are maximized.