

# **SPINE IMAGING AND INJECTIONS**

## **Pre-Exam Preparation**

Please be sure to read the following Pre-Exam Preparation and description of your procedure. If you have questions concerning your exam, preparation, or recovery time, please call us at (336) 433-5000.

- A Greensboro Imaging employee will contact you 24-72 hours prior to your appointment to review your procedure and any medications, allergies, or special conditions that may be relevant.
- Please be sure to bring previous films (MRI, CT, x-rays, if available) with you or have them sent ahead of time.
- Stop taking blood thinners 72 hours prior to the procedure. This includes aspirin, Coumadin and vitamin E. Plavix should be stopped 5 days prior to the procedure. You may need to consult your primary care/referring physician before doing so.
- If you are getting an injection, you will need a driver for your appointment.
- Liquids or a very light snack are recommended 2-3 hours prior to your injection. Don't eat a large meal! If you are having a cervical spine injection or a myelogram, only have liquids
- Please notify Greensboro Imaging if you are or think you might be pregnant.

## **Epidural Injections**

This procedure is performed to relieve or reduce pain symptoms in your cervical, thoracic or lumbar spine. Epidural injections decrease inflammation and swelling. The level of pain relief varies for each patient and may range from short to long-term. The injection may be repeated two more times at two week intervals.

## **What to Expect During Your Procedure**

The doctor will discuss your symptoms and review notes from your referring doctor as well as any prior imaging studies that have been performed. The procedure will be discussed with you in-depth. Using a thin needle and x-ray for guidance, the radiologist will position the needle and inject a small amount of contrast (dye) to confirm needle position. X-rays will be taken for documentation. A combination of anti-inflammatory medication and anesthetic will be injected at that time.

You will be completely awake and alert during the 15 minute procedure. You may experience slight pressure or discomfort during the injection. Please be sure to tell the radiologist if this is different from your usual symptoms. You will be asked to wait 20-30 minutes after your procedure before leaving our office

Patients having injections in the cervical or thoracic region will be given an IV prior to the procedure. Patients having lumbar procedures do not require an IV.

## **Nerve Root Injections**

This procedure may be performed as either a diagnostic or therapeutic tool. If your doctor is unsure about which particular nerve is responsible for your symptoms, we may perform a very targeted diagnostic injection that would affect a single nerve root to see if this reduces your symptoms. Therapeutic nerve root injections also include the injection of medicine to help reduce any pain from that particular nerve. This injection may be repeated two more times at two week intervals.

## **What to Expect During Your Procedure**

The experience of a nerve root injection is very similar to that of a standard epidural injection. Any symptoms you may have during the injection will be restricted to the area of your body served by that particular nerve root. The doctor will discuss your symptoms

and review notes from your referring doctor as well as any prior imaging studies that have been performed. The procedure will be discussed with you in-depth. Using a thin needle and x-ray for guidance, the radiologist will position the needle and inject a small amount of contrast (dye) to confirm needle position. X-rays will be taken for documentation. A combination of anti-inflammatory medication and anesthetic will be injected at that time.

## **Facet Joint and Sacroiliac Joint Injections**

These injections are performed when some or all of your symptoms are from an abnormal and painful joint. Your referring doctor and our radiologist will use your physical examination, description of your pain and response to prior injections if any, to determine if these joints may be contributing to your problem.

## **What to Expect During Your Procedure**

Many aspects of these injections are similar to the epidural injection and nerve root injections. X-ray guidance will allow the radiologist to precisely position a thin needle into the joint for treatment. The position in the joint is confirmed by injecting a small amount of contrast liquid. Steroids and anesthetic are injected into the joint. Patients usually feel a sensation of pressure and a reproduction of their familiar pain during the injections.

## **Recovery for Epidural Injections, Nerve Blocks and Joint Injections**

- Numbness as a result of the anesthetic may be present for 4-6 hours after the procedure.
- Your usual symptoms may return the night of the procedure and may even be more severe than usual for a day or two after the procedure.

- The steroids may take 2-3 days to take affect. Occasionally, it may take as long as 5-7 days.
- Patients should keep track of how long relief lasts and report it to their referring physician. If there is no change in pain, an investigation can be focused on the other possible sources. In either case, the information is useful to the doctor.
- Facial redness, night cramps, insomnia, headaches and increased heart rate are possible side effects with any steroid medication and will go away within a period of time after the injection.
- Patients may not drive on the day of the procedure.
- Patients should rest or plan only light activities the rest of the day.

## **Discogram (Diagnostic Disc Injections)**

Discograms are diagnostic exams preformed to learn more about the cause of the pain and help decided which treatment is appropriate. The purpose of discography is to determine whether a single disc or multiple discs are the source of your symptoms. This study is generally preformed on patients considering spinal fusion surgery.

### **What to Expect During Your Procedure**

At the appointment an IV will be placed to provide antibiotics and light sedation. Using x-ray guidance, a radiologist will place a thin needle into the center of the disc(s) thought to be causing your pain. Contrast is injected and x-rays are taken. During and immediately following the procedure, you will be asked to describe what you are feeling with specific interest in the similarity of the pain to your usual experience at home.

The procedure is preformed while you lie on your stomach. You will remain awake during the procedure which takes approximately 40 minutes. After the last injection, you will be given pain medication by IV. Depending upon the findings of your study and any prior imaging you may have had, a CT exam will follow.

## **Recovery from a Discogram Procedure**

- Some degree of discomfort during this procedure is expected.
- You will remain at our office for 2-3 hours for observation.
- Rest or limited activities should be scheduled for the remainder of the day. The decision to return to work the following day is at your own discretion. Patients should allow 2-3 days for complete recuperation.

## **Myelography**

Myelography is an examination of the spine that involves injecting contrast (dye) into the spinal fluid, followed by x-rays and a CT exam. This is done to provide additional information when MRI findings are complex or when an individual who cannot have an MRI.

## **Preparing for Your Procedure**

- A Greensboro Imaging employee will contact you 24-72 hours prior to your appointment to review your procedure and any medications, allergies, or special conditions that may be relevant.
- Please be sure to bring previous films (MRI, CT, x-rays, if available) with you or have them sent ahead of time.
- Stop taking blood thinners 72 hours prior to the procedure. This includes aspirin, Coumadin and vitamin E. Plavix should be stopped 5 days prior to the procedure. You may need to consult your primary care/referring physician before doing so.
- If you are getting an injection, you will need a driver for your appointment.
- Liquids or a very light snack are recommended 2-3 hours prior to your injection. Don't eat a large meal! If you are having a cervical spine injection or a myelogram, only have liquids

- Please notify Greensboro Imaging if you are or think you might be pregnant.

In addition certain, medication must be stopped 48-72 hours prior to your test. A representative from Greensboro Imaging will discuss this with you. Please have a list of all your medications available when Greensboro Imaging calls. If you change or add medications before your procedure, please call Greensboro Imaging at 433-5074 and leave a message for the nurse.

### **What to Expect During Your Procedure**

You will lie on your stomach for the procedure. Using an x-ray for guidance, a radiologist will insert a thin needle into the spinal canal in your low back. You will be lying on a table which can be tilted to allow the contrast to spread. Once the contrast had been injected, the needle is removed and x-rays are taken. You will remain awake during your procedure, which takes approximately 15 minutes. You may experience mild discomfort during your procedure. In most cases, immediately following the completion of a myelogram a CT scan will be performed, which will take an additional 30 minutes.

### **Recovery From Myelography:**

- You will remain at Greensboro Imaging for 1-2 hours for observation.
- Patients must arrange for some one to drive home.
- After arriving home, lie on your back, side or stomach for 24 hours. Elevate your head with no more than one pillow. This will decrease your chances of developing a headache after the procedure.
- You may walk to the bathroom and sit up to eat. However, activities requiring you to sit or stand should be kept to a minimum.
- Drink plenty of fluids (water and juices, not soda) to help clear the contrast solution from your body. The contrast will be absorbed and excreted through the urine as a clear substance within 24 hours. Avoid consumption of alcoholic beverages for 24 hours after the myelogram.

- Headache is a possible side effect. If, after following the above instructions, you develop a headache, nausea or dizziness which are made worse by sitting, standing or walking, continue the instructions as indicated above for an additional 24 hours. Continue to drink plenty of fluids. At this point, caffeinated beverages may be helpful. Remain in bed for 24 hours except for bathroom trips and meal times. If you do not feel relief after 48 hours, please contact Greensboro Imaging at (336) 433-5000.

## **Consultation for Vertebroplasty**

Most patients fall into two categories: those with osteoporosis who are being considered for vertebroplasty and other with disc diseases who may be candidates for IDET (Intradiscal Electrothermal) treatment.

Vertebroplasty is also called percutaneous vertebral augmentation. A cement-like substance is injected directly into the collapsed vertebra until the bone is filled. The bone cement hardens within minutes, strengthening the bone to stabilize the fractured components and preventing further collapse. By generating of heat the nerves causing pain are quieted by this procedure.

Evaluation of pain for vertebroplasty is done on an individual basis, but generally pain should be a recent onset (less than 6 months) and should clearly be due to a spine fracture.

Vertebroplasty is a well-established, definitive treatment for osteoporotic compression fractures.

## **Pre-Exam Preparation for Vertebroplasty**

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- Please be sure to bring any previous films (MRI, CT, x-rays, if available) or have them sent prior to your appointment.
- Patients should stop taking blood thinners 72 hours prior to the procedure. This includes aspirin, Coumadin and vitamin E. Plavix should be stopped 5 days prior to the procedure. You may need to consult your doctor before doing so.
- You will need a driver for your appointment if you are getting an injection.
- Please notify Greensboro Imaging if you are or think you may be pregnant.

### **Details of the Procedure**

- Patients will be taken to the Procedure Room where they will receive an intravenous medication to make them more comfortable.
- While on the stomach, a numbing medication is placed in the skin and in the deeper tissues near the fractured vertebra. Needles are directed to the collapsed vertebra under x-ray guidance.
- The cement substance is mixed and injected under constant observation into the vertebra until enough is filled to prevent further collapse.
- After the procedure, you will lie flat for 2 to 3 hours. You may go home the same day or stay overnight.

### **Consultation for IDET**

IDET (IntraDiscal Electrothermal Treatment) is a potential non-surgical treatment for disc disease where there has not been frank prolapse or herniation of the disk material. If the patient is considered a candidate after diagnostic tests including discography, the procedure is performed as an outpatient at the hospital. A small catheter is coiled in the disc and heated adjacent to the tear in the annulus, or outer part, of the disc. If successful, the patient will avoid the more invasive procedure of discectomy.

## **Radiofrequency Ablation**

Radiofrequency ablation can pinpoint spinal nerves that have been found to cause chronic pain. A thin needle is placed in the center of the nerve, guided by ultrasound or a CT scanner. Radiofrequency waves are used to vibrate or heat the nerve, killing only the part of the tissue causing pain and leaving the rest of the spinal nerve untouched.

The procedure may be performed under general anesthesia or conscious sedation. With conscious sedation, the patient receives pain medicine and sedation through an IV and skin-numbing medicine. Routine monitoring ensures patient safety during the procedure. Most patients feel little or no pain during the procedure.