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Epidural Steroid Injection





Why Do I Need an Epidural Injection?

When symptoms of pain are the result of spinal problems an epidural injection may be considered. The pain may be the result of an injury, an accident, surgery, or normal age related degeneration of the spine. The pain can present in the neck (Cervical Spine), mid back (Thoracic Spine) or the low back (Lumbar Spine). Different approaches can be used to inject into the spine (Transforaminal, Caudal, Intralaminar). Typically, epidural steroid injections are most commonly used to treat disc herniations, spinal stenosis or narrowing spinal column.

How Does an Epidural Injection Work?

When the spine is injured, diseased or degenerated, mechanical and chemical changes can cause inflammation, swelling and irritation of the nerve. The injection of a numbing medication (local anesthetic) or saline combined with a steroid can be used to reduce the inflammation. The injection treatment may be done in a series of injections. If relief is not obtained after two injections other treatment options are usually considered.



How Is an Epidural Injection Performed?

A number of different approaches are used to perform epidural steroid injections depending upon the specific problem that you have. You may or may not receive sedation. During this procedure the patient is positioned on an x-ray table. The skin is then frozen with a local anesthetic and the needle is inserted into the proper position. Fluoroscopy is used to place the needle precisely. The injection is then performed.

What Are the Potential Risks with an Epidural Injection?

As with any invasive procedure there is the risk of infection and bleeding at the injection site. There is also a chance of experiencing a spinal headache.

What Should I Expect Following This Procedure?

In most patients, pain relief will be noted in 2-7 days. It is common to have localized pain at the site of the injection for 1-5 days. There may be an increase in low back and leg pain until the steroids take effect and pain relief is experienced.



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Do you have pain that has lasted longer than 3 months? If yes, then you may be suffering from chronic pain.

Have you been taking pain medications, (Oxycontin, Morphine, Suboxone, Fentanyl, etc.) to stop the pain, but now, unfortunately, you are dependent on the medications? We can help you.

Our doctors at NeuroPain Consultants (with locations in Bloomfield Hills, Clarkston, Macomb and West Bloomfield) want to help you improve your quality of life and lessen the negative impact of chronic pain. You no longer have to let chronic pain take the front seat in your life. Call one of our pain management and treatment clinics today.

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Ketamine Infusion





Why Choose a Ketamine Infusion?

Ketamine plays a major role in blocking nerve channels that cause intense abnormal pain sensations, while still allowing the nerve to function normally. After infusion, pain is often decreased for prolonged periods of time.



How it Works:

Ketamine helps patients who have built a tolerance to narcotics or in conditions where the patient develops increased abnormal pain responses (hyperalgesia). Ketamine blocks the receptors involved with these symptoms and is able to reverse the symptoms.

What to Expect During Infusion:

A Registered Nurse and physician will monitor your full infusion process. An IV will be placed and the infusion will be delivered through a catheter in the arm or hand. Patient's vitals will be monitored throughout the infusion. Patient will report to the clinic 5 consecutive days for an average of 4 hours per day.

Patient should not have anything to eat or drink prior to their arrival and must have a driver accompany them and stay on premises until the patient is discharged.

What to Expect After Infusion:

Each patient case is different but many patients experience significant pain relief following the infusion. The length of relief also varies with each case.

Conditions Treated:

Neuropathic Pain, Complex Regional Pain syndrome, centralizhyperalgesia (extreme responses to simple actions, like a pinch or clothing touching your skin)

Other Conditions Treated at NeuroPain Consultants:

Musculoskeletal

- Back and Leg Pain
- Neck and Shoulder Pain
- Auto Related Injuries
- Sports Injuries
- Failed Back Surgery and Post-Surgical Pain Syndromes
- Myofascial Pain
- Facet Syndrome

Neuropathic Pain

- · Complex Regional Pain Syndrome (RSD)
- Post Herpetic Neuralgia
- Nerve Injuries
- · Phantom Limb Pain

Other Conditions

- Arthritis
- Disc Herniation
- Osteoporosis
- · Pinched Nerve
- Spinal Canal Stenosis
- Sacroiliac Joint Dysfunctions
- Sciatica
- Scoliosis
- Spondylolisthesis

Treatment Options

- Medication Management
- Physical/Occupational Therapy
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- Fluoroscopy & Ultrasound
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- Alternative Therapies
- Acupuncture
- Implantable Devices
- Intrathecal Medication
- · Spinal Cord Stimulator
- · Peripheral Nerve Stimulator
- Kyphoplasty

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Kyphoplasty



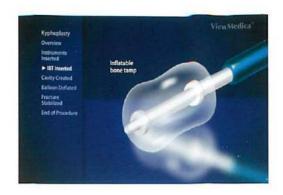


Why Do I Need a Kyphoplasty?

Kyphoplasty is an innovative, minimally invasive, non-surgical procedure that has proven to strengthen the vertebrae of your spine and significantly improve pain caused by vertebral body compression fractures. Fractures are often secondary to osteoporosis, cancer metastasis, or trauma. This therapy has helped people even when conservative therapies have not provided adequate relief.

How Does a Kyphoplasty Work?

Kyphoplasty stabilizes the fracture which decreases pain. It has also been shown to restore vertebral height and vertical alignment that was damaged by the collapse of the vertebrae.



How Is a Kyphoplasty Performed?

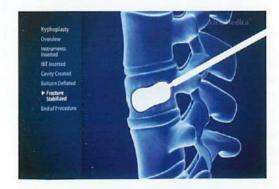
Kyphoplasty is also referred to Balloon
Assisted Vertebroplasty. This method
involves placing needles into the fractured
vertebra and placing a strong inflatable
balloon into the vertebra under x-ray. When
the balloon is inflated, it makes a space in
the center of the vertebrae, where acrylic
cement can be injected using low pressure.
The procedure takes about 30 minutes and
then the patient then lies flat for about 30
minutes while the cement hardens, after
which pain relief should be immediately
noticed.

What Are the Potential Risks With a Kyphoplasty?

As with any invasive procedure there is the risk of infection and bleeding at the injection site.

What Should I Expect Following This Procedure?

You will lie flat for 30 minutes afterward and slowly get up. You will then be discharged about 1 hour afterwards. Typically, day to day activities are resumed the following day. There is minimal soreness at the site of the procedure.



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Sacroiliac Joint Injection



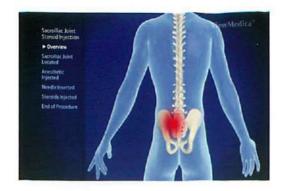


What is the Sacroiliac Joint?

The sacroiliac joints are on each side of the spine. They are the joints between the tailbone (sacrum) and the pelvis. While an x-ray may show arthritis in the structures, this does not necessarily indicate that pain is being generated from this area.

How Does a Sacroiliac Joint Injection Work?

The purpose of a sacroiliac joint block is both diagnostic and therapeutic. It is performed to determine if pain is being caused by the sacroiliac joint(s) and to treat pain coming from this area. Medications are used in the diagnostic and initial treatment phase of this treatment.



How is a Sacroiliac Joint Injection Performed?

Sacroiliac joint injections are performed in the procedure suite using fluoroscopy (x-ray). Sedation may or may not be used for this procedure. The patient is positioned on the fluoroscopy table and the sacroiliac joints to be treated are visualized. The skin is then frozen and a numbing medication (local anesthetic) with or without a steroid is injected into the sacroiliac joint(s) to be treated.

What are the Potential Risks With a Sacroiliac Joint Injection?

As with any invasive procedure there is the risk of infection and bleeding at the injection site.

What are the Expected Benefits of this Treatment?

Pain relief should be noted immediately after the procedure. It may only last for the duration of the local anesthetic (4-6 hours). In some patients the steroid that is injected may decrease pain for a prolonged period of time. It is common to have localized pain at the needle puncture site. Generally, ice applied to this area is helpful.

These procedures are most effective when combined with other methods to control pain which include physical therapy, medication management, weight loss, smoking cessation, and other recommended interventions. If you receive anesthesia or sedation additional risks are also present.



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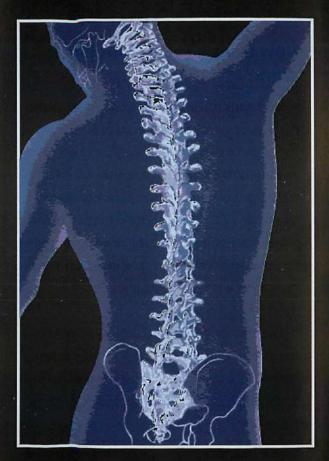
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Facet Joint Block





What Is a Facet Joint?

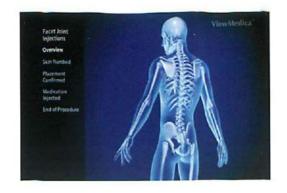
Facet joints are very much like finger joints that are located on each side of the spine at each disc level. These joints limit spinal movement and can cause pain after an injury or as they degenerate.

How Does a Facet Joint Block Work?

When the spine is injured, diseased or degenerated the facet joints may be a source of pain.

The resulting symptom is typically back pain which radiates into the legs to just above the knee. Pain and stiffness of the lower back is also noted and leaning forward slightly may make the pain better in the upper spine. Pain and stiffness is common in the upper spine as well. The facet joint block procedure can be both therapeutic and diagnostic.

This treatment can be used to identify a pain source and to relieve the pain that is produced by inflammation of the facet joint. If the relief is of short duration, a facet joint rhizotomy procedure may be considered.



How Is a Facet Joint Block Performed?

Facet joint blocks are performed in the procedure room using fluoroscopy (x-ray). Sedation may or may not be used for this procedure. The patient is positioned on the fluoroscopy table and the facet joints to be treated are identified. The skin is then frozen and a numbing medication (local anesthetic) with or without a steroid is injected into or around the facet joints to be treated.

What Are the Potential Risks with a Facet Joint Block?

As with any invasive procedure there is the risk of infection and bleeding at the injection site.

Very rarely nerve damage can occur.

What Are the Expected Benefits of This Treatment?

Pain relief should be noted immediately after the procedure. It may only last for the duration of the local anesthetic (4-6 hours). In some patients the steroid that is injected may decrease pain for a prolonged period of time. It is common to have localized pain at the needle puncture site. Generally, ice applied to this area is helpful.



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Rhizotomy



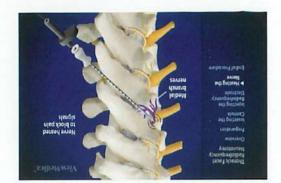


with a Rhizotomy? What Are the Potential Risks

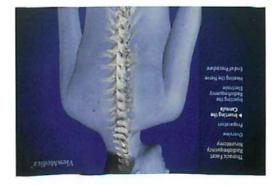
rarely nerve damage may occur. infection and bleeding at the injection site. Very As with any invasive procedure there is the risk of

Benefits of This Treatment? What Are the Expected

.luìqlad si the procedure. Generally ice applied to this area may be worse for the first 1-2 weeks following benefit of the procedure. In some cases the pain It may take up to 4 weeks to fully evaluate the Pain relief is usually delayed after a rhizotomy.



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Pertormed? How Is a Rhizotomy

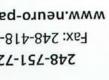
tissue and destroys the joint nerve. radiofrequency wave is applied which heats the the joint nerve. With the wire in proper position a wire is then inserted into a needle adjacent to injected around the joints to be treated. A small and a numbing medication (local anesthetic) is to be treated are identified. The skin is then frozen positioned on the fluoroscopy table and the joints not be used for this procedure. The patient is using fluoroscopy (x-ray). Sedation may or may A rhizotomy is performed in the procedure room

What Is a Rhizotomy?

brain by heating the nerve with a radiowave. sensory nerves from sending pain messages to the A rhizotomy is a procedure that is used to prevent

How Does a Rhizotomy Work?

and/or sacroiliac joint. treatment is used to relieve the pain in the facet stiffness is common in the upper spine as well. This slightly may make the pain better. Pain and the lower back is also noted and leaning forward legs to just above the knee. Pain and stiffness of back are typically back pain which radiates into the and painful. The resulting symptoms in the low affected. These joints frequently become arthritic or surgically treated, the facet joints may be When the spine is injured, diseased, degenerated



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Spinal Cord Stimulator Trial





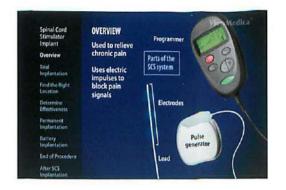
Treatment of Pain with Neurostimulation

Neurostimulation is an advanced therapy used for the treatment of certain types of chronic pain and neurological disorders.

The goal of Neurostimulation is to superimpose a pleasant pulsed stimulation (buzzing or tingling) over a patients normal pain pattern. This confuses the brain and changes the interpretation of the pain, resulting in pain relief.

What is a Spinal Cord Stimulator?

A Spinal Cord Stimulator (SCS) consists of a **lead** (a set of electrodes used to deliver electrical stimulation), an **extension** (a wire to connect the power source to the lead), and a **generator** (a battery powered source for the stimulation).



How is the Neurostimulator Implanted?

The implantation of a Neurostimulation system is usually a **two-phase**, outpatient, minor surgical procedure.

It consists of a **trial phase** and a **permanent placement phase**. If the trial phase is successful and the patient experiences at least 50-75% pain relief, the permanent placement may be scheduled.

Prior to the trial phase you **must** attend an education class that reviews this procedure in depth.

The trial consists of the physician placing the lead into the epidural space over the nerves believed to be producing the pain. The patient receives a local anesthetic and light sedation to allow them to verbally assist the physician with proper placement of the leads. Once the leads are inserted, they are connected to an external battery. The patient then goes home and monitors his/her pain relief.

If the trial is successful, the patient may be scheduled for permanent placement of the system.

There are two types of **permanent placement** and your physician will determine which approach and which system will be best for you.



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Discogram

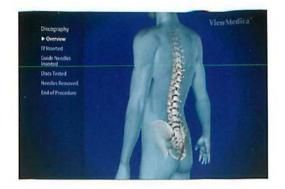




What Is a Discogram?

A discogram is a diagnostic test done to determine the specific location of pain originating in the spine. A MRI will show degenerative changes in the spine and while several discs will appear abnormal, not all will generate painful symptoms. When conventional imaging such as x-ray, MRI, or CT scan fail to show a specific problem a discogram may be used. The diagnostic test is usually done prior to a potential procedure or surgery such as a fusion.





How Is a Discogram Performed?

Disc injections are performed in the procedure room using fluoroscopy (x-ray). The patient is positioned on the fluoroscopy and the discs to be treated are identified. The skin is then frozen. A needle is inserted into the disc using x-ray guidance and dye is injected. The patient is awake during this procedure and is asked to report what he/she is feeling. When a disc is abnormal it will produce pain identical to the pain that is usually experienced by the patient. The patient will receive pain medication during and after the procedure as needed, but must remain awake during the procedure.

What Are the Potential Risks with a Discogram?

As with any invasive procedure there is the risk of infection and bleeding at the injection site. It is common to have localized pain at the needle puncture site. Generally, ice applied to this area is helpful. Rarely, nerve damage can occur.

What Are the Expected Benefits of This Treatment?

Following the discogram it is usually necessary to have a CT scan of the discs that were tested to complete the exam. The dye used to inject the disc will provide further information regarding the extent of disc disease and degeneration upon review of these films.



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Chronic Pain





What is Chronic Pain?

Pain that lasts longer than a 3 month period is chronic pain. Chronic pain problems have two categories:

- Pain that is due to an identifiable generator (an injury, for instance)
- Pain that does not have an identifiable generator (pain which occurs after an injury has healed, for example)

Common symptoms of Chronic Pain:

Neck pain	Arm Pain	Back Pain
Joint pain	Muscle pain	Arthritis Pain
Cancer Pain	Post surgical	Fatigue
Depression	Lack of sleep	Headaches
Tense Muscles	Lack of mobility	

Treatment and Care options:

Several non-invasive options exist to help with chronic pain. It is very important to tell your doctor about any pain and symptoms you are experiencing. This will help him or her to develop a unique treatment plan catered to your specific needs.

Your chronic pain treatment options may include:

- · Non addictive medications
- Physical therapy
- Injections (including intrathecal therapy or implanted pumps)
- Surgery (as a last resort)

Managing Chronic Pain:

Do not despair; there are several ways that you can reduce chronic pain and carry on with an improved quality of life.

Some things that you can try:

- Gather information about chronic pain and your specific treatment plan.
- Prioritize. Do not let chronic pain become the focal point in your life.
- Set realistic goals for your life, whether short term or long term.
- Learn how to accept your pain.
- Use over-the counter or prescription medications, if needed.
- incorporate relaxation techniques into your daily routine.
- Exercise as much as you are physically able to.
- Seek help from others. Learn how to talk to people about your chronic pain so they can be a listening ear and hopefully provide moral support along the way.

Conditions Treated:

Musculoskeletal

- · Back and Leg Pain
- · Neck and Shoulder Pain
- Auto Related Injuries
- Sports Injuries
- Failed Back Surgery and Post-Surgical Pain Syndromes
- · Myofascial Pain
- Facet Syndrome

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Lumbar Sympathetic Nerve Block



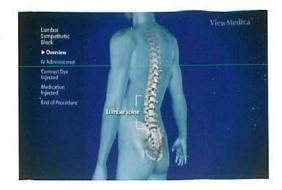


Why Do I Need a Lumbar Sympathetic Nerve Block?

The stellate ganglion (upper body) as well as the sympathetic chain (lower body) supply the entire body's sympathetic nervous system. Sometimes after injuries the sympathetic nerves can become excited or irritated. This can change the blood supply to your hands, feet, or other areas may be affected and can produce pain or sensory changes. Headaches, neck pain, and facial pain can also be seen in patients who have sympathetic nerve dysfunction.

How Is a Lumbar Sympathetic Nerve Block Performed?

A sympathetic nerve block involves injecting a local numbing anesthetic (lidocaine, bupivacaine) into the space where the sympathetic nerve ganglion are located. A local skin anesthetic is given first to numb the area and then another needle is inserted near the ganglion.



What Are the Potential Risks With a Lumbar Sympathetic Nerve Block?

Complications of the ganglion block include infection, bleeding, pneumothorax (collapsed lung), nerve damage, and pharmacological complications related to the drugs utilized. Since the goal of the procedure is to block sympathetic nerves, some expected but transient changes may result. These changes can include drooping of the eyelid and stuffy nose and usually resolve within hours.

What Are the Potential Benefits of This Procedure?

Sympathetic nerve blocks can be effective in relieving chronic pain conditions related to an overactive sympathetic nervous system.

One such condition, Complex Regional Pain Syndrome has been shown to have excellent analgesia and alleviation of clinical pain symptoms after sympathetic blocks. Pain that originates from the sympathetic nervous system is not easily treated by oral pain medications so sympathetic blocks are an extremely effective and beneficial treatment option.



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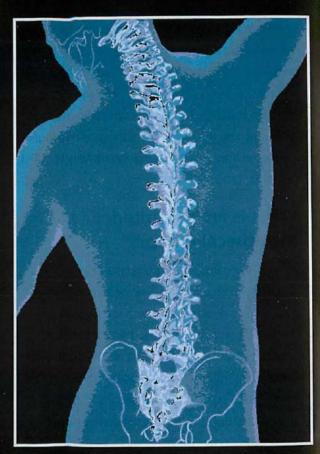
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Intrathecal Pump Trial





Treatment of Pain with Intraspinal Opioids

Chronic intractable pain causes extreme suffering for many people. Research has shown that when medication is delivered directly into the spinal fluid (intraspinal) by a mechanical system, this extreme suffering may be relieved. Through this type of delivery system, the medication binds directly to the pain receptors in the spinal cord and blocks the pain impulses. This prevents the pain message from reaching the brain, where the pain message is perceived. This type of medication delivery is called an implanted intrathecal pump.

What is an Implanted Intrathecal Pump?

An implanted intrathecal pump is a drug delivery system used to deliver opioids and other medications directly to the pain receptors in the spinal cord. Currently, two basic systems are available. One is a constant flow delivery pump, the other is a computerized programmable pump. The pump size is comparable to the palm of the hand or a hockey puck. Both pumps require a minor surgical procedure for insertion.



How is the Pump Implanted?

The insertion of an implanted intrathecal pump is an outpatient procedure that takes approximately 2 hours. While the patient is asleep, a catheter is placed in the intrathecal space of the spine and tunneled to the abdomen, where the pump is implanted under the skin.

Patient Selection Criteria

This method of pain control is not for everyone. It is used when other techniques to control pain have failed. This therapy is typically considered when more conservative therapies have failed or when unmanageable side effects accompany oral pain medication treatment.

Consideration is given to the availability of family support for the patient. An assessment for any underlying psychological or addiction problems is completed prior to any decision to implant. The patient must show a willingness to participate in rehabilitation.

Advantages

The greatest advantage is increased pain control. This is achieved because the medication goes directly to the opioid receptors in the spine. As a result of bypassing the other organs, there is a decrease in the typical opioid medication side effect, such as sedation, nausea, itching and constipation. Pain relief is also achieved with a much lower dose of medication. The pump typically needs refilling every 2-3 months and requires a needle stick through the skin into the pump.

Disadvantages

The pump, like all mechanical devices, can potentially malfunction. There is also a possibility for catheter problems such as kinking, dislodging, tearing and fibrosing or scarring.

As the implantation is a surgical procedure the risks include all of the potential risks associated with surgery, including infection nerve damage and rarely death.

