

### **Bursa Injections**

Bursa injections can help diagnose the source of pain and provide relief by delivering local anesthetic and steroid medications into specific synovial fluid filled fibrous sacs (bursa), which are adjacent to joints in the body. This procedure may reduce inflammation, resulting in long-term pain relief.

### **Celiac Plexus Blocks**

A celiac plexus block is commonly performed for abdominal pain and especially effective for pancreatic pain. The celiac plexus is a bundle of nerves located in front of the diaphragm and behind the stomach near the celiac artery and the abdominal aorta. The celiac plexus provides sensation to the liver, pancreas, gallbladder, stomach, spleen, kidneys, intestines, adrenal glands, and blood vessels. Blocking this region can relieve pain caused by one of these organs.

### **Caudal Epidural Steroid Injections**

Caudal epidural steroid injections involve injecting a steroid into the epidural space, where the irritated nerve roots are located. The caudal injection is performed through the sacral opening and is used to treat low back pain and leg pain. This injection includes both a long-lasting steroid and an anesthetic. The steroid reduces inflammation and irritation, while the anesthetic interrupts the pain cycle.

### **Discogram**

A discogram is an x-ray procedure that deliberately provokes the patient's pain symptoms in order to pinpoint its source in the intervertebral discs. The procedure is designed to identify the pain generator.

### **Epidural Steroid Injections**

Epidural steroid injections provide diagnostic data and pain relief by delivering local anesthetic and

steroid medications into the epidural space near the discs and nerve roots. This procedure may reduce inflammation, resulting in long-term pain relief and can provide valuable information about the source of your pain.

### **Intercostal Nerve Blocks**

Intercostal nerve blocks temporarily block or disrupt painful nerve impulses associated with non-cardiac pain in the chest wall area. Patients who have pain in the rib area due to trauma either via rib fractures, repetitive overhead maneuvers, shingles-pain, coughing or unknown reasons are candidates. Relief is often very rapid and patients may require a series of injections for long term relief.

### **Lumbar Sympathetic Block**

This procedure is performed to relieve leg pain caused by complex regional pain syndromes or sympathetically maintained pain, which may develop after injury. Usually a series of injections are needed to treat the problem.

### **Epidural Lysis of Adhesions**

This procedure involves passing a small epidural catheter into the epidural space and injecting medicine directly at the site of nerve injury or adhesion to decrease the pain and break up scar tissue. Scar tissue may form after back surgery or a disc injury.

### **Medial Branch Blocks**

Medial branch blocks are a minimally invasive non-surgical treatment of neck and back pain. The technique works by identifying the pain generator and reducing the inflammation that is causing your pain. An exciting aspect of this treatment is that if successful, a more long-term treatment known as radiofrequency ablation of the medial branches can

# Pain Management Procedures

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be employed. See Radiofrequency below for more information.

## Occipital Nerve Block

This procedure involves inserting a small needle through the skin over the scalp in order to block the nerve causing pain in the back of the scalp. Depending on the location of the pain, either the greater or lesser occipital nerves may be blocked. If treatment is successful, radiofrequency ablation can be considered.

## Piriformis Injections

Piriformis injections treat buttock and leg pain by relieving irritation of the sciatic nerve as it passes near the muscle. This is the most frequent site of sciatic nerve entrapment. Sciatic nerve entrapment can lead to buttock pain and pain that radiates down the back of the leg to the foot. The injection consists of a mixture of a local anesthetic and steroid.

## Radiofrequency Ablations

Radiofrequency ablations damage nerves by using localized heat. When the lesion is placed over the painful nerve, pain signals are interrupted and pain perception by the brain is decreased. Before the nerves are heated, a numbing agent is injected to virtually eliminate the pain of the procedure. Pain relief from these ablative procedures can last more than 12 months!

## Sacroiliac Joint Injection

A sacroiliac joint injection places local anesthetic and steroid into the sacroiliac joint. This is the joint where your pelvis joins the spine. Once the sacroiliac joints become inflamed, they may cause pain in the low back, buttocks, abdomen, groin, or legs. The amount of relief experienced immediately after the injections will help confirm or deny the joint as a source of pain.

The steroid will help to reduce any inflammation that may exist within the joint(s).

## Selective Nerve Root Blocks

A nerve root block is an injection into the sheath surrounding a nerve root in the spine to decrease your pain temporarily and define its cause more precisely. The exam uses steroid and local anesthetic to decrease pain and inflammation. Pain relief from the procedure varies from minimal to long-term, depending on the specific symptoms.

## Stellate Ganglion Blocks

A stellate ganglion block is an injection of a local anesthetic around the stellate group of nerves in the neck under fluoroscope guidance to relieve pain. The pain relief will affect one side of the head and neck, the upper arms and the upper part of the chest on the same side of the body. A stellate ganglion block may be performed to decrease pain and increase the circulation and blood supply to the affected areas.

## Superior Hypogastric Plexus Block

A superior hypogastric plexus block is a type of injection that is used to control pelvic pain. The superior hypogastric plexus contains the bladder, urethra, uterus, vagina, vulva, perineum, prostate, penis, testes, rectum, and descending colon, this block can potentially alleviate pain originating from these regions.

## Trigger Point Injections

Trigger points are tight knots of muscle that form when muscles fail to relax. Trigger point injections are commonly performed to treat painful muscles.