

FREEDOM FROM BACK AND NECK PAIN



Bumrungrad Spine Institute



**Bumrungrad
International**
HOSPITAL



Spinal Interventions: A Non-Surgical Approach for the Management of Back and Neck Pain

Low back and neck pain are both very common problems and unfortunately can be quite disabling. In fact, most people will have an episode of low back or neck pain at least once in their lifetime. Often, patients can manage their back or neck pain without needing to see a specialist; however, if pain persists without improvement after conservative treatments, spinal interventions may be the best solution to manage pain.

What is a spinal intervention?

Spinal interventions are non-surgical procedures that:

- Aim to relieve or find the cause of low back or neck pain.
- Determine the specific location in the spine from which the pain originates in potential surgical cases.

Most spinal interventions are injections.

- A mixture of corticosteroids and anesthetic agents are injected into the spine or near the source of pain.
- Fluoroscopy, a type of x-ray, is used to ensure the proper position of the needle. The position is confirmed by injecting a contrast dye.

Spinal injections that are done therapeutically are best performed in conjunction with the start of a physical therapy and/or home exercise program to strengthen the back and/or neck muscles. For patients whose pain is greatly improved, further procedures or surgery may be unnecessary.

How is a spinal injection performed?

Spinal injections are performed while you are awake; however, you may be given a mild sedative to help you relax.

The general process of an injection is as follows:

- The doctor will insert a thin needle, using an x-ray to help guide its positioning.
- After the needle is inserted, a mixture of anesthetic and steroids are injected.
- You will then be monitored for up to 30 minutes.

For your safety, it is best to have someone drive you home from the hospital, and rest for at least 24 hours after the procedure. With some patients, steroids require a few days to be effective. Results of spinal interventions normally last up to 3-6 months.

Who is a candidate?

Spine interventions are highly recommended in patients where:

- Pain limits their function.
- Pain disturbs their sleep.
- They have had unsuccessful results from other conservative treatments such as oral medications and rehabilitation.
- There is a high risk for surgery.

Which procedure should I have?

The selection of injection technique is most often determined by the location of the pain and the most likely structure(s) involved. Common sources of pain are nerve root pain, joint pain, muscle pain, or a combination of any of the above.

Some of the most common spinal interventions are as follows:

1. Epidural steroid injections (ESI)

ESIs treat pain caused by inflamed spinal nerves. Success rates vary:

- Symptoms present for less than 3 months: 90% successful.
- Symptoms present for approximately 6 months: 70% successful.
- Symptoms present for 1 year: 50% successful.

Benefits tend to be temporary, ranging from several weeks to years. Improvements are noticed within 3-10 days after the injection.

Patients generally require 1-2 injections for maximum benefit and are best performed in conjunction with the start of a physical therapy and/or home exercise program.

2. Facet joint injections

These are used to diagnose and/or temporarily relieve neck or back pain caused by inflamed facet joints, the area where two vertebrae meet in the spine. Benefits tend to be temporary, ranging from several days to years. About 50% of patients experience some degree of pain relief.

If prior injections are helpful but the pain returns, facet joint injections can be repeated up to 3 times a year. If there was no pain relief after the first injection, further injections would not be helpful.

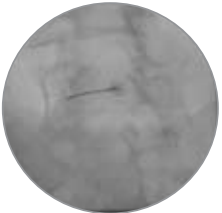
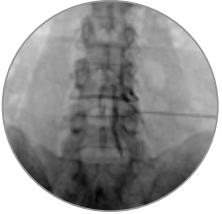
3. Medial branch nerve block injections

These injections also treat or diagnose pain arising from the facet joints of the spine. Local anesthetic is injected into the medial branch nerves, the small nerves that control feeling in the facet joint. Results are usually noticeable 10-20 minutes after the injection. If there is at least 70% pain relief, more injections may be recommended.

With medial branch nerve block injections, if the pain goes away initially but later returns, a radiofrequency neurotomy may be a more appropriate treatment option.

4. Radiofrequency neurotomy

This procedure uses heat producing radio waves to destroy medial branch nerves, disrupting pain signals to the brain caused by facet joints. It is normally recommended after a medial branch nerve block was successful.



Average pain relief has been shown to last 10½ months and success rates are about 85%. The degree of pain relief varies from person to person, and may take up to 3 weeks before maximum pain relief is evident.

The procedure may be repeated as long as the pain relief lasts longer than 6 months each time.

5. Sacroiliac (SI) joint injections

SI joint injections are commonly used as a diagnostic tool to determine the cause of a patient's low back pain. The SI joint is injected with a local anesthetic and cortisone to numb the area. If the SI joint is the source of the pain, the injection will temporarily eliminate the patient's pain.

If the SI joint is confirmed as the structural source of pain, exploring options for treatment may be more successful.

6. Discography

Discography identifies a painful disc due to a bulge, herniation, tear, or degeneration. It is the only procedure that can tell if a disc problem is a source of pain. If the needle reproduces the patient's pain, an anesthetic medication with cortisone is injected. If the pain disappears, the disc is confirmed the source of the pain.



What are the potential benefits and risks of spinal injections?

Potential Benefits:

- Up to 75% pain relief, commonly lasting up to 3-6 months
- Improved function and mobility
- Less invasive, with shorter recovery time than surgery
- No hospital stay is required

Risks and potential complications

- The procedure may not relieve the pain
- The procedure may need to be repeated as often as every 3-6 months
- Pain may recur in other places
- Increased blood sugar level, especially in patients with diabetes
- Dizziness, increased pain (rare)
- Bleeding, infection (very rare)