



Lumbar Facet Joint Injection

A facet joint injection is a diagnostic tool widely used for chronic axial low back pain. Facet joints are the small joints located between two neighboring vertebra that provide the spine with both stability and flexibility. Like other joints of the body (i.e. knee, hip, shoulder joints), facet joints are subject to arthritis changes when the cartilage covering the joint surface wears off from degenerations secondary to stress (bone spurs) and inflammation.

Different from radicular pain (sciatica), facetogenic back pain is often localized only on the back without any radiation to the leg.

Typically, a solution containing cortisone (steroid) with local anesthetic (i.e. bupivacaine), is used.

- A steroid, or cortisone, is usually injected as an anti-inflammatory agent. Inflammation is a common component of many low back conditions and reducing inflammation helps reduce pain. Kenalog (Triamcinolone), Decadron (Dexamethasone), and Solu-Medrol (Methylprednisolone) are commonly used steroids.
- Bupivacaine, a long lasting local anesthetic, is often used primarily for pain relief.

Indications:

Facet arthropathy: arthritis in the facet joints

Contraindications:

- Local or systemic infection
- Pregnancy
- Bleeding problems - patients taking blood thinners (i.e. Coumadin, Plavix, etc.), or patients with bleeding problem (i.e. hemophilia, severe liver dysfunction)
- Pain related to a spinal tumor (primary such as multiple myeloma or secondary from tumor metastasis). If suspected, an MRI scan should be done prior to the injection to rule out a tumor.

Cautions: Injections may be done, but with caution, for patients with other potentially problematic conditions such as:

- Allergies to the injected solution (steroid or local anesthetics).

- Uncontrolled medical problems such as renal disease, congestive heart failure and diabetes due to fluid retention that a small percentage of patients experience for a few days after steroid injections.
- Use of high dose aspirin or other anti-platelet drugs (e.g. NSAIDS, Plavix), all of which can cause bleeding from the procedure. These medications should be stopped prior to an injection.

Procedure:

- A facet joint injection usually takes between 20 and 30 minutes depending on the total number of facet joints under treatment.
- The patient lies flat on an X-ray table in a prone (face down) position with a pillow placed under his/her abdomen to help curve the lumbar spine to open up the intervertebral space.
- The skin in the low back area is cleaned with antiseptic (chlorhexidine sticks) and then numbed with lidocaine (a fast-acting local anesthetic similar to what a dentist uses)
- Using fluoroscopy (live X-ray) for guidance, a needle is inserted into the skin and directed toward each facet joint.
- The mixture of bupivacaine and steroid solution is then injected. For some patients only local anesthetic (i.e. bupivacaine) is injected for diagnostic purpose if side effects from steroids are of concern.
- Following the injection, the patient is monitored for 15 to 20 minutes before being discharged home.
- Sedation is available for patient anxiety and comfort. However, sedatives are rarely necessary, as the facet joint injection procedure is usually not uncomfortable.
- If a sedative is used, some patient precautions should be taken, including no eating or drinking for 8 hours prior to the procedure and having a ride home available for discharge.
- There is no definitive research to dictate how many facet joint injections should be administered or how frequently they should be given. In general, the consensus is to perform up to three injections per year.

Post-procedure:

- Patients are usually asked to rest and avoid strenuous work such as heaving lifting for the remainder of the day after the injection.
- Normal activities may typically be resumed the following day.

- To avoid infection at the injection site, patient should avoid hot tubs, Jacuzzi baths, or swimming within 24 hours after injection. Running shower is OK.
- Soreness or a temporary increase in the pain can occur for several days after the injection due to the pressure of the fluid injected or due to local chemical irritation.
- Patients are usually given a pain diary to record the percentage of pain relief (compared to pre-procedure pain score) every 2 hours for 12 hours after diagnostic facet joint injection.
- If patient achieves over 50% pain relief within 12 hours after the diagnostic facet joint injection, radiofrequency ablation of medial branch which innervates the facet joint should be planned as the next step for longer duration of pain relief.

Complications:

- Tenderness at the needle insertion site can occur for several hours after the procedure and can be treated by applying an ice pack for 10 to 15 minutes once or twice per hour.
- Infection should be suspected if pain persists days after the procedure with redness and swelling at the needle insertion site. Immunosuppressed patients such as cancer patients and poorly controlled diabetic patients are at higher risk.
- Bleeding or hematoma is extremely rare but serious complication. Anatomical factors such as vertebral abnormalities, technical errors like traumatic injection, multiple attempts at needle placement, and pharmacological factors such as use of anti-platelet and anticoagulant therapy may be implicated in the formation and progress of bleeding or hematoma.
- Treatment failure occurs sometimes with no significant pain relief after procedure. Exploration into other diagnoses (i.e. radicular pain, discogenic pain, myofascial pain, etc) is indicated.