

What's a trigger point injection?

A trigger point injection (TPI) is an injection that is given directly into the trigger point for [pain management](#). The injection may be an anesthetic such as [lidocaine](#) (Xylocaine) [orbupivacaine](#) (Marcaine), a mixture of anesthetics, or a corticosteroid (cortisone medication) alone or mixed with lidocaine. Sometimes, a needle alone is inserted into the trigger point, and no medication is injected. This may be helpful and is referred to as "dry needling." With the injection, the trigger point is made inactive and the pain is relieved.

- Trigger points are focal areas of muscle spasm, often located in the upper back and shoulder areas.
- A trigger point injection involves the injection of medication directly into the trigger point.
- Trigger point injections can be used to treat a number of conditions including [fibromyalgia](#), [tension headache](#), and [myofascial pain syndrome](#).

How is the trigger point injection procedure performed?

The trigger point injection is performed in the health-care professional's office, usually with the patient either lying on the exam table on the stomach or sitting on the exam table. The exact protocol varies. The health-care professional performing the procedure locates the trigger point by manual palpation and marks the site. [Ultrasound](#) guidance is not generally necessary. The injection site is then cleaned. Alcohol or another skin cleanser such as betadine is commonly used to clean the injection site. Frequently, a numbing spray such as ethyl chloride is used to anesthetize the skin and make the actual injection less painful. The needle is then inserted into the trigger point and the medication is injected. After the injection, a simple adhesive bandage may be applied. If the area is painful after the injection, ice, heat, [acetaminophen](#) (Tylenol), or [over-the-counter](#) nonsteroidal anti-inflammatory medications such as [ibuprofen](#) (Advil) or [naproxen](#) sodium may be used.

When is a trigger point injection used?

Trigger point injection is used when a patient has a painful trigger point, especially when pain radiates from the trigger point to the surrounding area. Trigger point injections may be used as a treatment for conditions such as fibromyalgia and myofascial pain syndrome. However, the trigger points commonly recur with [chronic pain](#) syndromes.

What are complications and side effects of trigger point injections?

A potential complication from the trigger point injection procedure is post-injection pain. This is relatively uncommon, but it can occur. This pain usually resolves by itself after a few days. It is more common when no medication is injected into the trigger point (dry needling). Ice, heat, or over-the-counter medications such as acetaminophen, ibuprofen, or naproxen sodium may be useful for post-injection pain.

If a steroid medication is injected into the trigger point, shrinkage of the fat under the skin can occur, leaving a dent in the skin. This does not occur when only anesthetic is injected without any steroid medication. Other side effects are rare with trigger point injections but can occur anytime a needle punctures the skin, including infection and bleeding.

How frequently do trigger point injections need to be administered?

Optimally, a trigger point resolves after one injection. This may happen when a patient has one isolated trigger point, especially if the cause of the trigger point has been removed (such as a trigger point caused by a repetitive minor trauma or movement that will no longer be performed). Trigger points caused by chronic conditions such as fibromyalgia and myofascial pain syndrome tend to recur due to the underlying problem. In these cases, trigger point injections may be administered on a regular or as needed basis. The frequency of trigger point injections depends on the medication being injected. If only lidocaine or a mixture of anesthetics is injected, then the injections can be administered as ongoing therapy as frequently as monthly. If a steroid medication is injected, TPIs should be administered much less frequently, at the discretion of the treating health-care professional, because of the risk of tissue damage or shrinkage from the steroid medication.

What is an epidural steroid injection?

An epidural steroid injection is a common procedure to treat [spinal nerve](#) irritation that is caused by tissues next to the nerve pressing against it. The beginning of the nerve (nerve root) is most often irritated by an [inflamed intervertebral disc](#), or disc contents, directly touching the spinal nerve. An epidural steroid injection involves bathing an inflamed nerve root in steroids (potent anti-inflammation medicine) in order to decrease the irritation of the nerve root that is causing pain.

How is an epidural steroid injection performed?

The epidural steroid injection procedure is quick and simple. While it is common for people to be concerned prior to the procedure, it is actually frequent to hear from patients afterwards: "Is that all?"

The [spinal cord](#) rests in the spinal canal. The nerve roots branch out from the spinal cord at each level of a spinal [vertebra](#) (the bony building blocks of the spine). The cord is protected by cerebrospinal fluid ([CSF](#)), which serves as a shock absorber for the cord. The CSF is held in place by a membrane with several layers, one of which is called the [dura](#), from the Greek for tough (think of "durable"). The Greek word "epi" means "outside of." So, the epidural space is outside of this tough membrane. During an epidural steroid injection, a needle and syringe are used to enter the epidural space and deposit small amounts of long-lasting steroids around the inflamed spinal nerve. A fluoroscope (a viewing instrument using X-rays) is used to visualize the local anatomy during the injection. The epidural steroid injection specifically targets the inflamed area and treats it with a maximal amount of steroids, thereby minimizing exposure of the rest of the body to the steroids.

When are epidural steroid injections used?

Epidural steroid injections are most commonly used in situations of [radicular pain](#), which is a radiating pain that is transmitted away from the spine by an irritated spinal nerve. Irritation of a spinal nerve in the low back ([lumbar radiculopathy](#)) causes pain that goes down the leg. Epidural injections are also used to treat [nerve compression](#) in the neck (cervical spine), referred to as cervical radiculopathy.

Vertebroplasty: A nonsurgical method for repairing [osteoporosis](#) back fractures, such as vertebral compression fractures. Vertebroplasty is performed by a radiologist, without surgery, and involves inserting a glue-like material into the center of the collapsed spinal vertebra to stabilize and strengthen the crushed bone. The material is inserted through anesthetized skin with a needle and syringe, entering the mid portion of the vertebra under the guidance of specialized X-ray equipment. Once inserted, the material hardens to form a cast-like structure within the broken bone. Relief of pain comes quickly from this casting effect, and the newly hardened vertebra is then protected from further collapse. In addition to prompt pain relief, another advantage of Vertebroplasty is improved mobility, also referred to as kyphoplasty.

Kyphoplasty: A procedure similar to [Vertebroplasty](#), but with the intent of expanding the collapsed [vertebra](#). A surgical instrument is introduced into the [spine](#) with a balloon that is inflated to expand the bone. Once this instrument is withdrawn, the space created is then filled with the bone cement mixture. By creating space in this way, kyphoplasty procedures may correct deformity or restore body height.

Like Vertebroplasty, the use of kyphoplasty to treat osteoporotic compression fractures in patients where conservative treatment has failed is relatively recent. A fracture of the spine, whether from [osteoporosis](#), trauma or [cancer](#), is basically a [broken bone](#). The usual treatment for a broken bone is to stabilize it. A broken vertebral body can be stabilized either by a percutaneous (through the skin) procedure, such as a Vertebroplasty, Kyphoplasty, or by open surgical procedures.