

Epidural Steroid Injections PATIENT EDUCATION SHEET

Anatomy of the Spine

The "epidural space" is the space between the covering of the spinal cord (dura mater) and the inside of the bony spinal canal. It runs the entire length of your spine. The "dura" is the sac which houses the spinal fluid and some parts of the spine, the spinal cord as well. Most epidural steroid injections which are performed in the lower back are performed at levels which are well below the end of the spinal cord (which usually terminates between T12 and L2). Epidural steroid injections given in the high lumbar area, thoracic spine or cervical spine, are in closer proximity to the spinal cord, but can still be performed safely with proper technique, and visualization.

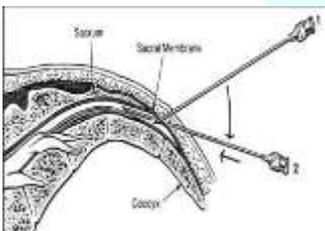
Epidural Steroids for Pain Relief

An epidural steroid injection (ESI) is a common type of injection that is given to provide relief from certain types of low back, mid back and neck pain. When injected into this area the medication moves freely up and down the spine to coat the nerve roots and the outside lining of the facet joints near the area of injection. The medication will usually spread for 1 to 3 levels above the level of the injection. For example, if the injection is given in the lower lumbar spine, the medication will usually affect the entire lower portion of the spine, but not the thoracic spine or cervical spine. Steroids work by reducing inflammation in each of these areas.

Regardless of level, the epidural needle(s) is (are) inserted into the back until the doctor feels sure it is in the epidural space. This can be confirmed with x-ray imaging and contrast dye, unless you are allergic. There are three different ways to perform an epidural injection: caudal, interlaminar or transforaminal/selective nerve root block.

Caudal

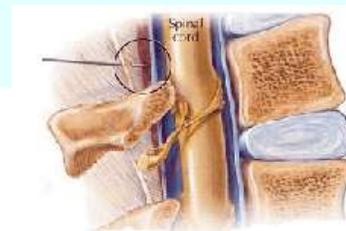
A caudal block is placed through a gap in the sacral spine known as the hiatus. The injection is then directed into the epidural space of the lowest part of the lumbar spine. This type of block usually affects the spinal nerves at the end of the spinal canal near the sacrum.



This collection of nerves is called the cauda equina, or "horse's tail." A caudal ESI is usually performed when accessing the lower part of the spine directly is difficult or unreliable (typically after spinal surgery or in the case of severe spinal stenosis.) One of the benefits of this type of injection is less chance of puncturing the dural sac.

Interlaminar (ILESI)

The interlaminar approach is the most common way of performing an epidural injection. This



type of injection is performed by placing a needle between two vertebrae from the back. The needle is inserted between or alongside the spinous processes of two vertebrae. You can actually feel the bumps that make up the spinous process by feeling along the back of your spine. Since this is done under x-ray, these bony landmarks can be identified which help guide the doctor towards the epidural space. The space is also identified using a special needle and technique known as the "loss of resistance."

Transforaminal (TFESI) or Selective Nerve Root Block (SNRB)

The transforaminal approach is a very selective injection, directed at the exit points of the nerves of spine or around a specific nerve root. The foramina are small openings between your vertebrae through which the nerve roots leave the canal and enter the body. injecting medication specific nerve root, the determine if this nerve causing the problem. This epidural injection is very for diagnostic purposes, performed in the lower can very beneficial not only for pain in the back, but radiating pain in the legs, as well numbness and tingling. Since 85% to 90% of 'sciatica' cases originate in the back, these injections may help with this type of condition also.



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