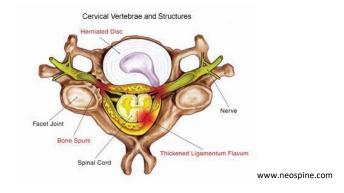
# **Thoracic Nerve Root Steroid Injection (TNRI)**

#### What is an epidural space?

It is a space that surrounds the spinal cord and nerve roots. Furthermore, the back spine is separated into four regions: cervical (neck), thoracic (mid back), lumbar (low back), and caudal (sacral area). Therefore, the thoracic epidural injection defines the epidural space in the mid-back region.

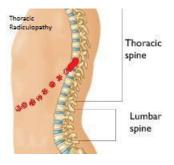
## What are the indications of thoracic nerve root injection?

Among many indications the listed are the main indications: post-thoracotomy syndrome, herniated disc, degenerated disc disease (DDD), radiculopathy, bone spurs, thicken ligamentum flavum, and spinal stenosis.



## How does thoracic nerve root steroid injection bring pain relief?

The pain is produced due to inflammation of the spinal nerve roots, which may be experienced as pins/needle sensation, shooting /stabbing pain which radiate from mid-back to the flank and/or abdomen area. With the thoracic nerve root injection, steroids surround the thoracic spinal nerves, which help decrease the nerve root inflammation and irritation. Therefore, the procedure can help decrease the mid-back pain symptoms.



#### What are risks for the thoracic nerve root injection?

Among many, here are few listed rare side effects: increased pain, infection, bleeding, nerve damage, weakness, neuropathy, back pain and increased blood sugars.

## How is the thoracic nerve root injection performed?

After sterile preparation of the thoracic region, the injection site if localized under X-ray. Following the local anesthetic applied to the injection site, which can help decrease the injection site pain, the needle is guided toward the nerve root with the help of X-ray. After the space is localized, it can be further confirmed with liquid contras. After the space is confirmed, the steroid medication is injected, and the needle is taken out at the end of the procedure.

#### What to expect after the procedure?

This is an **outpatient procedure**. Patients are monitored in the recovery room after the procedure. Patient is educated that pain relief may be achieved to its full potential over the 1-2 week period. Patient may experience some localized mid-back pain at the injection site, which may be minimized by the previously applied local anesthetic. Patients are discharged from the recovery room once they have the discharge criteria.

## How long the relief from the thoracic nerve root steroid injection would last for?

It varies from patient to patient. Usually, the pain relief can last for >8 weeks, and may require repeat the epidural injections if necessary.

Please tell your pain physician if you are taking any blood thinners. For example: Coumadin, Plavix, Heparin, Lovenox and etc. The blood thinners need to be stopped before the epidural injection, and the time frame will be prescribed by your pain physician.