

# Transforaminal epidural steroid injection

Alternative [treatment](#) for chronic radicular pain.

More efficacious as it injects the concentrated steroid and anaesthetic solution selectively at the pathologic site or along the [dorsal root ganglion](#).

## Types

[Transforaminal cervical epidural steroid injection](#)

[Transforaminal lumbar epidural steroid injection](#).

The use of [digital subtraction angiography](#) (DSA), imaging to exclude vascular uptake during TFESI increases radiation dose over conventional [fluoroscopy](#) (CF). [computed tomography](#) CT/fluoroscopy incurs additional dose beyond most DSA. Minimizing radiation dose by limiting DSA and CT/F use to spine segments or clinical situations involving higher risk may be desirable. However, the incremental radiation doses incurred by DSA or CT/F are of such low magnitude that health risks cannot currently be estimated <sup>1)</sup>.

Anecdotal report suggests that provocation of pain during epidural steroid injection (ESI) that is concordant with typical radicular symptoms predicts pain outcome following injection. However, limited evidence exists that substantiates this theory. Additionally, there is a paucity of literature investigating factors associated with the provocation of pain during ESI.

## Outcome

Provocation of concordant radicular pain does not predict pain relief at short-term follow-up after a transforaminal ESI. [Foraminal stenosis](#), nerve root impingement, and lack of a medial-superior contrast flow pattern are associated with pain during the transforaminal ESI. Thus, clinicians should be aware of these radiologic and procedural risk factors for inciting pain during transforaminal ESI <sup>2)</sup>.

<sup>1)</sup>

Maus T, Schueler BA, Leng S, Magnuson D, Magnuson DJ, Diehn FE. Radiation dose incurred in the exclusion of vascular filling in transforaminal epidural steroid injections: fluoroscopy, digital subtraction angiography, and CT/fluoroscopy. Pain Med. 2014 Aug;15(8):1328-33. doi: 10.1111/pme.12455. Epub 2014 Jun 24. PubMed PMID: 24961152.

<sup>2)</sup>

McCormick Z, Margolis S, Temme K, Rivers E, Cameron SA, Smith MC, Rohr A, Zander E, Garvan C, Kennedy DJ, Plastaras C. Concordant Pain Provocation During Transforaminal Epidural Steroid Injection for Lumbosacral Radiculopathy: Effect on Pain Outcome and Predictive Factors. Pain Physician. 2015 Jan-Feb;18(1):E19-E26. PubMed PMID: 25675066.

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Last update: **2024/06/07 03:00**