

Thoracolumbar spine fracture classification

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There have been attempts in the past to classify [thoracolumbar spine fractures](#) in different ways: according to mechanisms of [injury](#) ¹⁾, differentiating between flexion and distraction injuries ^{2) 3) 4) 5)}.

Thoracolumbar injury classification and severity score (TLICS)

see [Thoracolumbar injury classification and severity score](#).

AOSpine thoracolumbar spine injury classification system

see [AOSpine thoracolumbar spine injury classification system](#).

Denis

A widely used model for [thoracolumbar spine stability](#) is the 3 column of Denis.

see [Denis Classification](#) and [Three column model](#).

see [McAfee classification](#).

see [Magerl classification of thoracolumbar spinal fractures](#).

Classification into major and minor injuries

Minor injuries

Involve only a part of a column and do not lead to acute instability (when not accompanied by major injuries). Includes:

1. fracture of the [transverse process](#): usually neurologically intact except in two areas:
 - a) L4-5→lumbosacral plexus injuries (there may be associated with renal injuries, check U/A for blood)
 - b) T1-2→brachial plexus injuries
2. fracture of [articular process](#) or [pars interarticularis](#)
3. isolated fractures of the [spinous process](#): in the TL spine: these are usually due to direct trauma. Often difficult to detect on plain X-ray
4. isolated laminar fracture: rare. Should be stable

Major injuries

The [McAfee classification](#) describes 6 main types of fractures ⁶⁾. A simplified system with four categories follows

Pediatric Thoracolumbar Spine Fracture

[Pediatric Thoracolumbar Spine Fracture](#)

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Gertzbein SD, Court-Brown CM. Flexion/distraction injuries of the lumbar spine. Mechanisms of injury and classification. Clin Orthop. 1988;227:52-60.

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Rennie W, Mitchell N. Flexion-distraction injuries of the thoracolumbar spine. J Bone Joint Surg Am. 1973;55:386-390.

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Smith WS, Kauter H. Patterns and mechanics of lumbar injuries associated with lap seat belts. J Bone Joint Surg Am. 1969;51:239-254.

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