

# Translation-rotation spine injury

Translation-rotation spine injuries are severe injuries characterized by horizontal displacement or rotation of one vertebral body with respect to another.

**Pathology** These injuries result from torsional and shear forces. This type of injury is usually severe and involves the posterior ligamentous complex (PLC).

**Radiographic features** Translation-rotation spine injuries are characterized by:

unilateral or bilateral perched or dislocated facet joints vertebral body subluxation/translation or rotation. Translational injury is best seen on lateral radiographs or sagittal CT or MR images, while the mediolateral instability is best seen on coronal images. posterior ligamentous complex injuries: splaying of the spinous processes with widening of the interspinous space avulsion fractures of the superior or inferior aspects of contiguous spinous processes common additional findings include transverse process and rib fractures Practical points Using the thoracolumbar injury classification and severity score (TLICS), results in 3 points for the morphology and 3 points for the PLC, making a total of 6 points, which indicates a need for surgical stabilization.

**Differential diagnosis** distraction/Chance fractures <sup>1)</sup>.

<sup>1)</sup>

<https://radiopaedia.org/articles/translation-rotation-spine-injury#:~:text=Translation%2Drotation%20spine%20injuries%20are,body%20with%20respect%20to%20another>.

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