TRAUMA

CERVICAL SPINE INJURIES

When assessing cervical spine injuries, consider the need for **immobilisation** and do this as soon as possible. As a rule of thumb, **if an X ray is required then immobilise.**

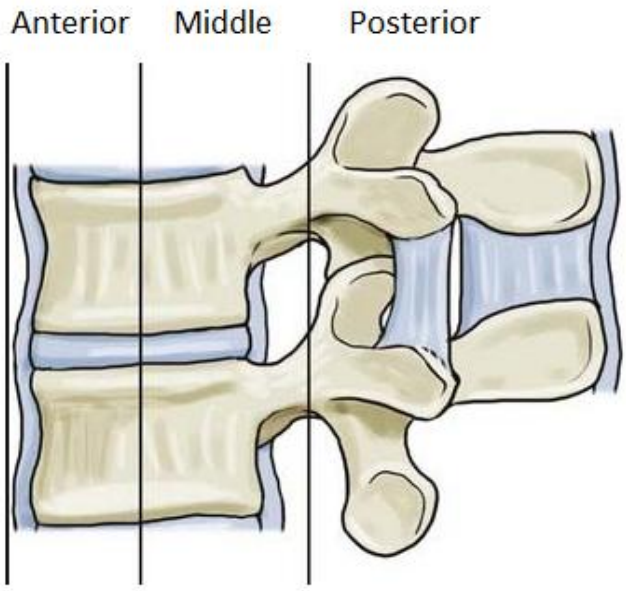
In conscious patients with blunt trauma to the neck, use the **Canadian Cervical Spine Rules** to determine the need to perform imaging.

X ray is usually the initial imaging modality. If views are inadequate CT should be performed. X ray should comprise three views: lateral, anteroposterior and open mouth (peg view).

Indications for CT include:

- Age >65.
- Neurological deficit attributable to a cervical spine lesion.
- Patients undergoing CT for head injury or multi-region trauma.
- GCS <13 on initial assessment.
- Unable to accurately assess (reduced GCS, intubated, dementia).
- Known vertebral disease (eg. ankylosing spondylitis, rheumatoid arthritis).
- Suspected or visible abnormality on X ray.

10% of patients with one spinal fracture/displacement will have a spinal fracture in another location – so **image the whole spine if a fracture is identified**.



Stability

Stability refers to the mobility of sections of the vertebral column or fragments of bone. Unstable fractures are more likely to cause neurological injury.

Instability occurs with fractures that affect two contiguous spinal columns (see image). If one column is disrupted, the other two may provide stability. If two columns are disrupted the spine may move as two separate units.

Specific fractures of the upper cervical spine are often unstable even if the three column concept cannot be demonstrated (eg peg fracture)

Complications:

Spinal shock, neurogenic shock, complete/incomplete cord syndromes, Horner's syndrome and vertebral artery injury are among the complications of cervical spine injuries.