



## MRI of the spine for cervical trauma

### MBS item description

Referral by a medical practitioner (excluding a specialist or consultant physician) for a scan of spine for a patient 16 years or older for suspected:

- **cervical spinal trauma** (R) (K)

There is insufficient evidence to suggest MRI for cervical trauma improves health outcomes.

If bony injury of the cervical spine is suspected, CT is the preferred imaging. It is superior to both MRI and X-ray in identifying cervical spine fractures, and is generally quicker.

MRI is superior in identifying soft tissue abnormalities such as spinal cord and ligamentous injuries. However, not all abnormalities identified may be clinically significant.

### About cervical trauma

Fracture is the major concern with cervical spine trauma and may not be clinically obvious.

Imaging to exclude fracture is often a routine part of investigation of the trauma patient.

In the primary care setting, history and physical examination guide imaging decisions (as opposed to using emergency setting tools such as the Canadian C-spine rule or NEXUS criteria).

Imaging is not required if the patient is awake, alert, without neurological deficit and has no neck pain or tenderness with full range of motion of the cervical spine.[1]

It is safe to assess for range of neck movement if the patient:

- does not have midline cervical tenderness (which suggests a fracture or dislocation) or other serious injuries
- was involved in a simple rear-end collision
- is in a sitting position in the waiting room
- can walk at any time after the injury
- has delayed onset of neck pain.

### Cervical trauma and MRI

MRI is not required to clear the spine if a radiologist has reported a negative CT.

MRI's role in evaluating ligamentous injuries (i.e. whiplash injuries) is controversial. MRI may not demonstrate acute ligamentous injuries and the changes it does reveal in late stage whiplash injury may not be clinically significant.

MRI has a role where other imaging is contraindicated or inconclusive, or where clinical or imaging findings suggest ligamentous, spinal cord and/or arterial injury

MRI suffers from poor specificity in determining clinically-relevant information such as instability.