

Canadian C-Spine Rule

For alert (GCS=15) and stable trauma patients where cervical spine injury is a concern.

1. Any High-Risk Factor Which Mandates Radiography?

Age ≥ 65 years
or
Dangerous mechanism*
or
Paresthesias in extremities

Rule Not Applicable If:

- Non-trauma cases
- GCS < 15
- Unstable vital signs
- Age < 16 years
- Acute paralysis
- Known vertebral disease
- Previous C-spine surgery

No

Yes

2. Any Low-Risk Factor Which Allows Safe Assessment of Range of Motion?

Simple rearend MVC**
or
Sitting position in ED
or
Ambulatory at any time
or
Delayed onset of neck pain***
or
Absence of midline c-spine tenderness

No

Radiography

Unable

Yes

3. Able to Actively Rotate Neck?

45° left and right

Able

No Radiography

* Dangerous Mechanism:

- fall from elevation ≥ 3 feet / 5 stairs
- axial load to head, e.g. diving
- MVC high speed ($>100\text{km/hr}$), rollover, ejection
- motorized recreational vehicles
- bicycle struck or collision

** Simple Rearend MVC Excludes:

- pushed into oncoming traffic
- hit by bus / large truck
- rollover
- hit by high speed vehicle

*** Delayed:

- i.e. not immediate onset of neck pain

Canadian CT Head Rule

CT head is only required for minor head injury patients with any one of these findings:

High Risk (for Neurological Intervention)

- 1. GCS score < 15 at 2 hrs after injury**
- 2. Suspected open or depressed skull fracture**
- 3. Any sign of basal skull fracture***
- 4. Vomiting \geq 2 episodes**
- 5. Age \geq 65 years**

Medium Risk (for Brain Injury on CT)

- 6. Amnesia before impact \geq 30 min**
- 7. Dangerous mechanism ** (pedestrian, occupant ejected, fall from elevation)**

***Signs of Basal Skull Fracture**

- hemotympanum, 'raccoon' eyes, CSF otorrhea/rhinorrhea, Battle's sign

**** Dangerous Mechanism**

- pedestrian struck by vehicle
- occupant ejected from motor vehicle
- fall from elevation \geq 3 feet or 5 stairs

Rule Not Applicable If:

- Non-trauma cases
- GCS < 13
- Age < 16 years
- Coumadin or bleeding disorder
- Obvious open skull fracture