

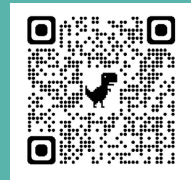
# Canadian C-Spine Rule

## ANPT Concussion/mTBI Knowledge Translation Task force

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### Clinical Practice Guideline Physical Therapy Evaluation and Treatment After Concussion/Mild Traumatic Brain Injury

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### Purpose

To determine when radiography should be utilized in patients following trauma.

**1. Any High-Risk Factor that Mandates Radiography?**  
Age greater than or equal to 65  
or  
Dangerous Mechanism\*  
or  
Paraesthesia in Extremities

YES to ANY

NO to ALL

**2. Any Low-Risk Factor that Allows Safe-Assessment of Range of Motion?**  
Simple Rear-End MVC\*\*  
or  
Sitting Position in ED  
or  
Ambulation at Any Time  
or  
Delayed Onset of Neck Pain\*\*\*  
or  
Absence of Midline C-Spine Tenderness

NO  
to  
ALL

YES to ANY

**3. Able to Actively Rotate Neck?**  
45 Degrees Left and Right

ABLE

**IMAGING  
RECOMMENDED**

**IMAGING NOT  
RECOMMENDED**

### Rules Not Applicable if:

- Pregnant
- Acute Paralysis
- Less than 16 years old
- Known Vertebral Disease
- Non-trauma
- Glasgow Coma Scale less than 15
- Unstable Vital Signs
- Previous C-Spine Surgery

### \*Dangerous Mechanism

- Fall from elevation less than or equal to 3 ft or 5 stairs
- Axial load to head
- MVC high speed (>100Km/hr), rollover, ejection
- Motorized recreational vehicle
- Bicycle collision

### \*\*Simple Rear-End MVC

- Pushed into oncoming traffic
- Hit by bus/large truck
- Rollover
- Hit by high speed vehicle

### \*\*\*Delayed Onset of Neck Pain

- Not immediate onset of neck pain

### References

- Stiell IG, Wells GA, Vandemheen KL, Clement CM, Lesiuk H, De Maio VJ, Laupacis A, Schull M, McKnight RD, Verbeek R, Brison R. The Canadian C-spine rule for radiography in alert and stable trauma patients. *Jama*. 2001 Oct 17;286(15):1841-8.
- Stiell IG et al. The Canadian C-Spine Rule versus the NEXUS Low-Risk Criteria in patients with trauma. *N Engl J Med* 2003;349:2510-8.