Anterior Neck Assessment

TWELVE-C

Using the TWELVE-C mnemonic to assess the anterior neck for risk of significant injury and impending airway obstruction following trauma.

T — **Tracheal deviation** – assess for tenderness, deviation

W — **Wounds** – assess for open wounds/haemorrhage

E — **Emphysema** (subcutaneous/surgical)

L — **Laryngeal tenderness / crepitus**

V — **Venous distension** – assess for vascular injury such as bruising/bruit/expanding haematoma
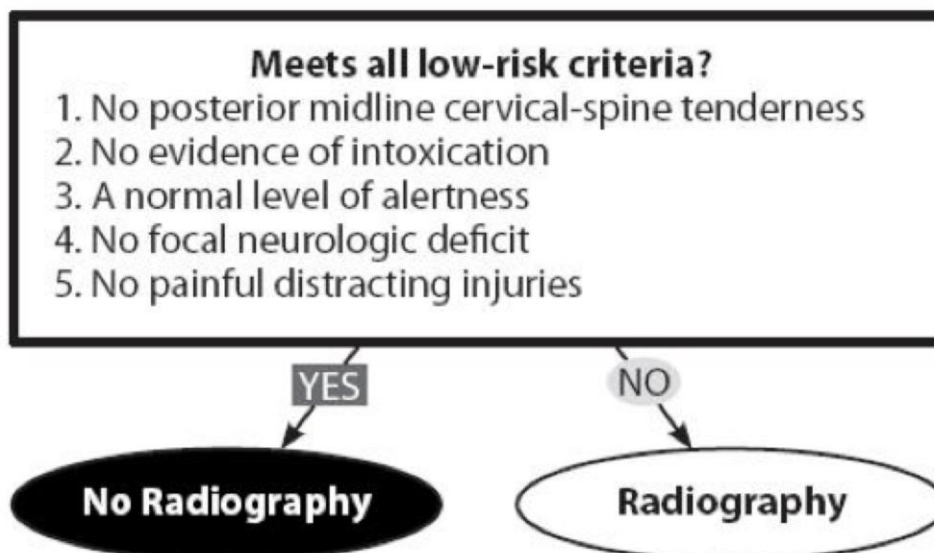
E — **oEsophageal injury** – assess for pain on swallowing (injury unlikely if able to swallow easily)
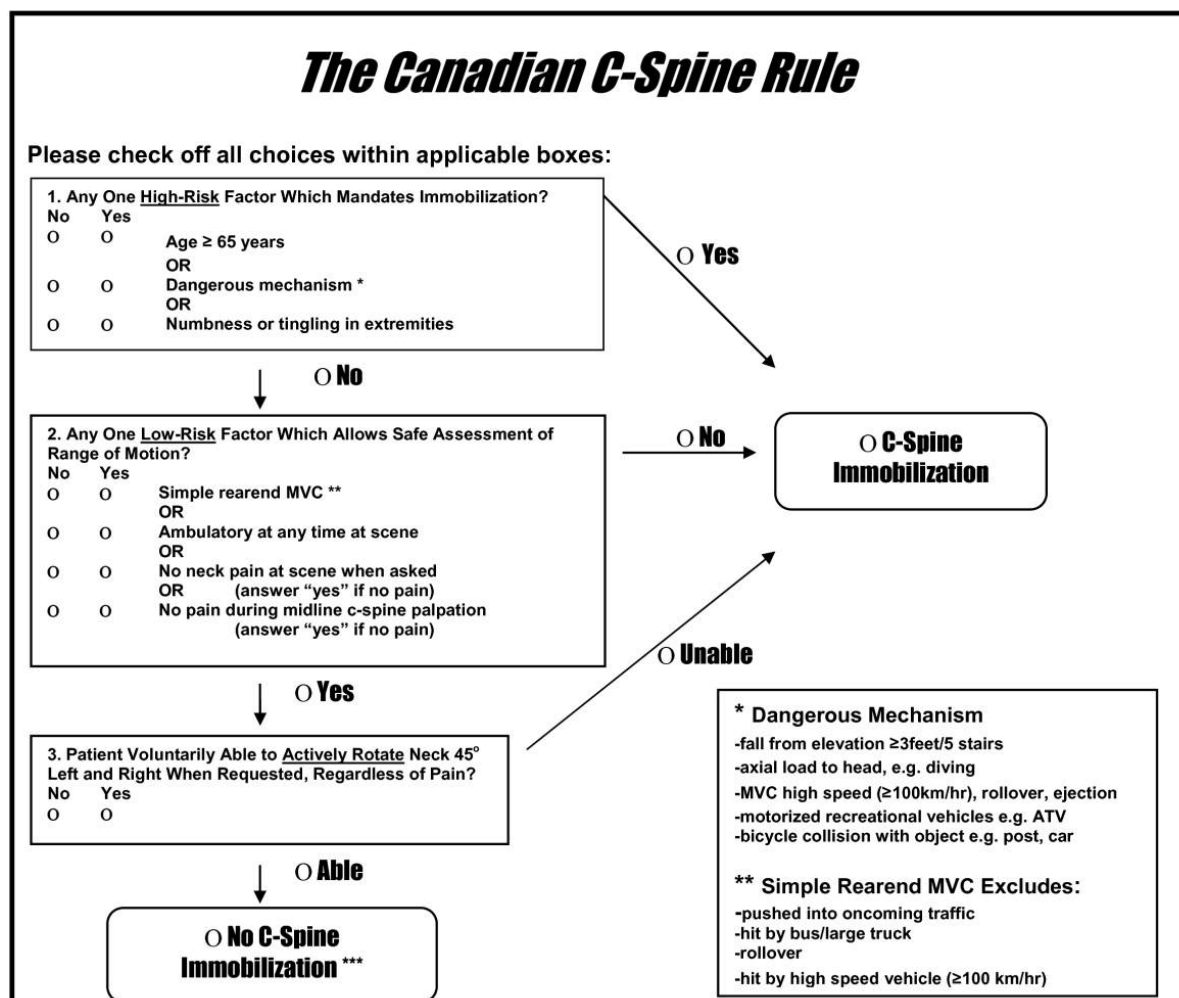
C — **Carotid haematoma / bruits / swelling**

*Collar should be opened/removed to visualise anterior neck while manual inline stabilisation (MILS) is maintained.

National Emergency X-Radiology Utilization Study (NEXUS) Criteria

Meets all low-risk criteria?
1. No posterior midline cervical-spine tenderness
2. No evidence of intoxication
3. A normal level of alertness
4. No focal neurologic deficit
5. No painful distracting injuries

YES → No Radiography

NO → Radiography

Available at https://bit.ly/3drehVJ

Canadian C-Spine Rule

The Canadian C-Spine Rule

Please check off all choices within applicable boxes:

1. Any One High-Risk Factor Which Mandates Immobilization?
No Yes
O O   Age ≥ 65 years
OR
O O   Dangerous mechanism *
OR
O O   Numbness or tingling in extremities

→ O Yes

O No

2. Any One Low-Risk Factor Which Allows Safe Assessment of Range of Motion?
No Yes
O O   Simple rearend MVC **
OR
O O   Ambulatory at any time at scene
OR
O O   No neck pain at scene when asked
OR   (answer "yes" if no pain)
O O   No pain during midline c-spine palpation
(answer "yes" if no pain)

O No → O C-Spine Immobilization

O Yes

**3. Patient Voluntarily Able to Actively Rotate Neck 45°
Left and Right When Requested, Regardless of Pain?**
No Yes
O O

O Unable → O C-Spine Immobilization

O Able

O No C-Spine Immobilization ***

* Dangerous Mechanism
-fall from elevation ≥3feet/5 stairs
-axial load to head, e.g. diving
-MVC high speed (≥100km/hr), rollover, ejection
-motorized recreational vehicles e.g. ATV
-bicycle collision with object e.g. post, car

** Simple Rearend MVC Excludes:
-pushed into oncoming traffic
-hit by bus/large truck
-rollover
-hit by high speed vehicle (≥100 km/hr)

Available at: https://bit.ly/3cV5rzH

Spinal Trauma Neck Assessment Procedural Skill Setup Guide

Session overview
This skills session is to assess participants in assessment for neck injury following trauma utilising structured clinical format.

Learning outcome
By the end of this session, and with ongoing practice, the participant will be able to: • demonstrate ability to perform anterior neck assessment   • demonstrate understanding of TWELVE-C prompt   • demonstrate the ability to assess for cervical spine injury   • identify risk factors for neck and cervical spine injury   • demonstrate ability to place a cervical spine collar   • demonstrate clinical clearance of cervical spine

Skill	Resources	Checklist
Assess anterior neck • TWELVE-C **Discuss significance of findings** **Outline management options** • Blunt • Penetrating • Burns **Assess cervical spine** **Apply cervical collar** **Demonstrate clearance of cervical spine**	• Airway heads • Airway trainer • Collars, variety of types	