

## Cervical Spine Fractures – FAQ

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Reference: NBTP Consensus Statement – Clinical Practice Guideline for Cervical Spine Injuries

### C-Spine Trauma

Cervical spine injury following trauma can either be an isolated injury or one of a few complex injuries. Maintaining C-Spine immobilization with the use of a cervical collar until clearance of the C-Spine is completed involves clinical assessments, optimized through use of evidence-based guidelines.

### When an injured patient arrives to the Emergency Department (ED) via ANB Paramedics with a C-collar in place, what are my nursing responsibilities?

- Transfer the patient to the ED stretcher while maintaining C-spine precautions: head and neck supported during transfer by appropriate staff and use of slider board or scoop stretcher.
- Leave the C-collar in place; check if properly applied/sized and adjust if needed.
- Ensure that patients remain supine, avoiding movement of the head, neck and back.
- If needed, place rolled towels on either side of head, but not taped down, even if patient is unconscious.
- In some situations, patients may have extenuating medical history that prevents him/her from being placed in supine position (i.e. kyphosis of neck, COPD, etc.) These patients should have a proper fitting collar and be encouraged to remain in a position of comfort, avoiding movement of their head, neck and back.
- Obtain baseline neuro vital signs and vital signs on arrival. If findings are abnormal, notify Physician and request order for frequency of neuro signs.
- If C-spine x-rays or CT scans are ordered –check patient to ensure necklaces and earrings are removed so they do not interfere with imaging.

### Who is responsible to clear the C-Spine in the Emergency Department?

- The attending physician is responsible to clear the C-spine. The steps within the consensus statement can help - please see Appendix A, B within the consensus statement.

### What should a nurse do after Emergency Physician has cleared C-spine and ordered the C-collar removed?

- The nurse should ask the physician for a written order, noting the date and time of the order. Alternatively, a nurse can write the order as a verbal order and ask the physician to sign. The nurse must then document on patient's record the name of the Physician, date, and time of order and when C-collar was removed.

**Should ED nurses expect to have a patient arrive from scene or on transfer immobilized on spinal board and C-collar?**

No, ED nurses should very rarely see ADULT trauma patients arrive on a hard spinal board with straps, as Ambulance New Brunswick implemented changes to spinal protection in December 2015 following release of consensus statement on Pre-Hospital and Inter-Hospital Use of Long Spine Board. If a patient does arrive to your facility on long spine board, ensure early logroll of the patient off spine board and share information with NBTP Trauma Nurse responsible for your site.

**How are Pediatric population who have potential for C-Spine managed by pre-hospital?**

Ambulance New Brunswick paramedics manage patients less than 16 years by applying a C-Collar at scene, and may use a Pedi-Pac for full immobilization of smaller patients. Pre-hospital clearance of C-Spine is not completed for those under age 16.

**How are pre-hospital patients assessed by ANB for possible C-Spine injury over age 16 years?**

Alert, cooperative patients over 16 years are managed by Paramedics through application of the Canadian C-Spine rules. If cleared by Paramedics at scene, these patients do not require a collar unless assessment on arrival in the ED detects new findings or symptoms that require application of a C-collar.

**When awake/alert patient arrives via ANB with C-collar in place should I as a nurse expect this patient to automatically need an X-ray or CT scan of the neck?**

No, a nurse should not automatically expect a patient with a C-collar in place to have X-rays or a CT scan. You can expect the Physician to assess the patient using the C-spine consensus statement recommendations which include Physician application of the Canadian C-spine rule.

**When an unconscious injured patient arrives via ANB Paramedics with a C-collar in place, should a nurse expect this patient to have CT scans of the neck for C-spine assessment?**

Yes, an unconscious injured patient must have a CT scan of the C-spine completed to determine C-spine clearance and removal of the C-collar if no cervical spine injuries are found on CT.

**Who is responsible to determine if a C-spine injury diagnosed on CT scan is stable or unstable?**

A stable C-spine injury often times can be determined by attending physician and Radiologist. A Neurosurgeon or Spine surgeon should be consulted when questions related to C-spine stability occur. A call to the Toll Free Trauma Referral System will assist in consultation of a Neurosurgeon or Spine surgeon.

**Would an ED Nurse expect to have a stable C-Spine (isolated injury) discharged from ED or admitted to their hospital with request for application of Aspen Collar?**

Yes, a Neurosurgeon or Spine Surgeon, after review of CT scans may request the removal of hard C-collar and the application of an Aspen Collar (see Appendix C of C-Spine consensus statement) for patients with a stable, isolated C-Spine injury. If the patient discharged from Emergency with Aspen collar, directions for care and hygiene as well as collar removal must be reviewed prior to discharge, with a hard copy of these directions being left with the patient (See Appendix C of C-Spine consensus statement)

**What other if any directions from Neurosurgeon or Spine Surgeon should I expect for stable C-Spine injury?**

You can expect direction for follow-up with a Neurosurgeon or Spine Surgeon within 2 weeks for stable C-spine injury. Proper communication between patient and ED discharging patient with an Aspen collar in place must be made to ensure follow-up with the Neurosurgeon or Spine Surgeon. Nurse to inform the Patient to contact the consulted Physician's office if they have not received a call with their appointment within 3-5 days.

**How long should a hard extrication C-collar remain in place?**

A hard C-collar should be removed as soon as possible and replaced with an Aspen collar, ideally within 24 hours.

**Does my hospital have a supply of Aspen Collars?**

NBTP Trauma Nurses at each site have made requests for a stock of Aspen collars at Level I, II, & III trauma center sites. If an Aspen collar is not immediately accessible, a request for one should be made to appropriate supplier. Patients **cannot** go home with a hard collar in place. Patients may need to be admitted (especially the elderly) to await proper Aspen collar application and teaching.