

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.