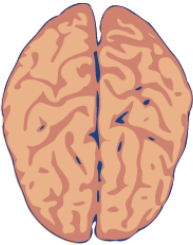


**Neurosurgery Education
and Outreach Network** **NE**  **N**

Cervical Collar Care and Management

January 2025

NEON Statement

The Neurosurgery Education and Outreach Network (NEON) is comprised of Neurosurgery Nurse Educators, Advanced Practice Practitioners, Clinical Nurse Specialists and Directors from each of the 13 neurosurgery centres.

The mandate of the NEON is to plan and implement neurosurgery system-wide improvements, through education and outreach, to address gaps in skills and knowledge, and improve access and patient flow between neurosurgery and non-neurosurgery centres.

Disclosure Statement

The Neurosurgery Education and Outreach Network (NEON) and Critical Care Services Ontario (CCSO) have no financial interest or affiliation concerning material discussed in this presentation.

This presentation provides direction on how to provide collar care to patients with a cervical orthosis device to ensure consistency within and across organizations. It was developed by a sub-group of clinical neurosurgical nurses and neurosurgical educators for health care professionals (HCPs) across Ontario. This presentation is not meant to be exhaustive and its contents are recommended but not mandated for use. HCPs should use their clinical judgment and utilize other assessment parameters if determined necessary.

NEON Links

Ontario Health Region	NEON Contacts
West Region	Windsor Regional Hospital
West Region	London Health Sciences Centre
West Region	Hamilton Health Sciences
West Region	McMaster Children's Hospital
Central Region	Trillium Health Partners
Toronto Region	University Health Network St. Michael's Hospital Sunnybrook Health Sciences Centre The Hospital for Sick Children
East Region	Kingston General Hospital
East Region	The Ottawa Hospital
North East Region	Health Sciences North
North West Region	Thunder Bay Regional Health Sciences Centre

Learning Objectives

The learner will be able to:

- Identify indications for cervical collar use.
- Describe the different types of cervical collars.
- Summarize complications of cervical collars.
- Use and maintenance of cervical collars.
- Involve and educate patients and care partners/caregivers in the care of patients with cervical collars.

Definition

A cervical collar is an orthosis device that fits the neck, anywhere from the jaw to the chest. It is used to limit movement and support the neck to allow healing when treating a cervical injury, fracture, or following a surgical procedure.



Photo used with permission from Aspen. Retrieved from [Vista® Cervical Collar](#).



Photo used with permission from Ossur. Retrieved from [Miami J® Select Cervical Collar | Ossur.com](#)



Photo used with permission from Ossur. Retrieved from [Ossur. Life Without Limitations. Ossur.com](#)

Indications

Acute injuries:

- e.g., cervical fracture.

Non-acute injuries:

- e.g., strained cervical injuries.

Chronic conditions:

- e.g., arthritis or cervical metastasis.

Post-Operative:

- e.g., cervical fusion.

Purpose

- Keep the neck centrally aligned; maintain neutral spinal alignment.
- Immobilize the cervical spine (c-spine) to limit movement.
 - Restricts neck flexion, extension, and lateral tilt (bending & rotation).
- Provides support to stabilize injured area to prevent further injury.
- Decreases muscle spasms.
- Reduces or controls pain – e.g., controls pain for a degenerative disease that affects neck strength; after a spinal injury; or post-operatively.



Photo used with permission from Aspen.
Retrieved from [Aspen® Pediatric Collar](#)

Cervical Collar Types

- Cervical collars can be soft or rigid.
- Soft cervical collars are made from thick foam rubber covered in cotton.
- The soft support helps in the treatment of minor neck strains and is used to support the neck and control pain after an injury (e.g., whiplash) or surgery.
- Soft collars may be ordered in conjunction with hard collars in some centres. e.g., rigid collar when up; soft collar when in bed.
- Please note: some centres will only order rigid collars; neuro/ortho surgeon specific.



Example of a soft collar. Photo used with permission from Ossur. Retrieved from [Foam Cervical Collar](#)

Rigid Cervical Collars

Made from a two-piece (anterior and posterior) molded plastic with removable pads and secured with hook-and-loop fasteners. This creates a rigid collar to support the head and neck. e.g. Aspen Vista, Miami-J, and Philadelphia.

- Cervical collars are single patient use and cannot be shared between patients. The pads can act as a reservoir for blood, sweat, and bacteria.



Photo used with permission from Aspen. Retrieved from [Vista® Cervical Collar](#)

Common Rigid Collars

The Aspen® collar



Photo used with permission from Aspen.
Retrieved from
[LIT5086B_Vista_CC_Sell_Sheet_2ac6e9db-397e-412c-b6b2-40828320264b.pdf](#)

The Philadelphia® collar



Photo used with permission from Ossur. Retrieved
from [Philadelphia® Tracheotomy Collar](#)

The Miami J® collar

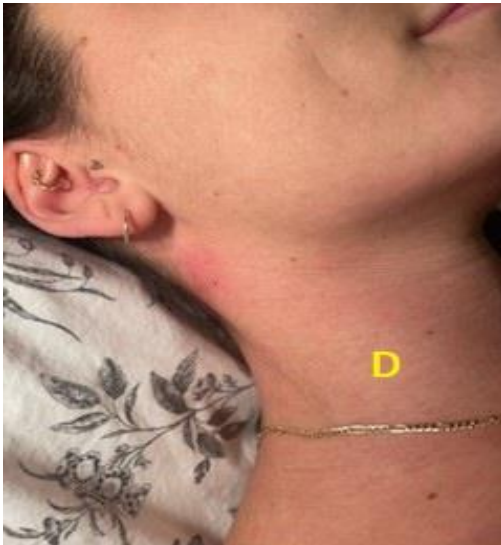


Photo used with permission from Ossur.
Retrieved from [Miami J® Cervical Collar | Ossur.com](#)

Complications

- Skin Damage.
 - At risk for pressure injuries (PI);
 - Specific areas of concern are the occiput, chin, mandible, ears, shoulders, laryngeal prominence, sternum, and neck area.
- Incorrect collar fit may affect swallowing, coughing and breathing. Wearing a collar may cause vomiting limitations, potentially causing aspiration.
- Further injuries to the spinal cord that could be caused by ineffective cervical immobilization (e.g., improper collar fit, patient not wearing collar as prescribed).
- Possible delayed response to airway difficulties due to unfamiliarity with collar and how to maintain stability of c-spine (e.g., choking, code blue event).

Examples of Complications



Common Areas for Pressure Injuries (PI):

- A. Chin
- B. Shoulders
- C. Back of neck/shoulders
- D. Under the ears
- E. Occiput/back of the head

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Use and Maintenance of Cervical Collars

- After surgery, patients may need to wear the collar at all times, unless otherwise instructed by the MRP (most responsible practitioner).
- Duration of collar wear time is always patient specific and will be determined by the MRP. Duration of time may be as short as four weeks or as long as six months.



Photos used with permission from Aspen. Retrieved from [LIT5207A Vista Collar.pdf](#)

Use and Maintenance of Cervical Collars

- For proper sizing, follow the specific cervical collar manufacturer's instructions/recommendations and/or hospital policy.
 - Initial fitting of a rigid collar is done by a trained health care provider.
- Must fit snugly and be secure to maintain neutral alignment and immobilization.



Photo used with permission from Aspen.
Retrieved from [Vista® Cervical Collar](#).

Use and Maintenance of Cervical Collars

To assess for proper fit:

Does the collar fit snugly under the chin to support the chin and jawline? If **NO**, readjust the anterior piece.

- Anterior piece extends from mandible to just below sternal notch. Chin is centered comfortably in chin support.

Does the chin slip inside the collar? If **YES**, readjust and tighten the anterior piece.

- Chin should not extend over edge of pad, nor fall inside collar. Anterior piece angled up toward ears.

Do you notice that the patient can move their head within the collar? If **YES**, tighten the collar.

- Hook and loop straps on the posterior piece should be the same length on each side. Sides of posterior piece should overlap sides of anterior piece. No slack or gaps in any of the straps.

Is the patient's skin protected? If **NO**, realign pads to protect skin from plastic edges.

- Lower plastic edge should not be resting on patient's clavicles nor digging into trapezius. Adjust pads as needed to prevent plastic from touching skin.

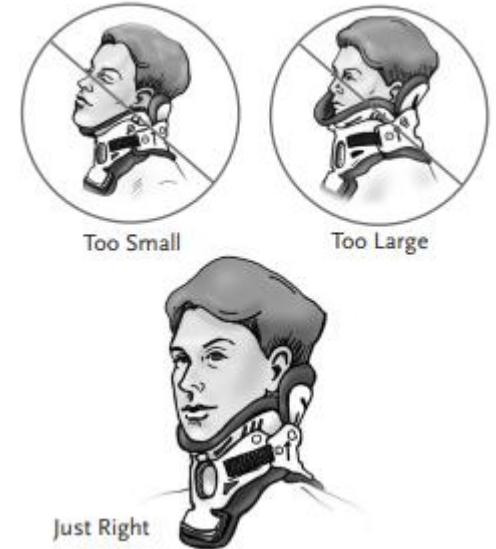


Photo used with permission from Ossur.
Retrieved from Ossur. (2010). "Miami J
Sizing and Application Instructions."

Any time collar adjustments are made, the patient needs to remain in neutral spinal alignment. Please follow MRP instructions re: activity.

Use and Maintenance of Cervical Collars

- Follow MRP orders for collar care and management. If MRP orders not provided, please contact the MRP.

Collar Care and Management includes:

- Skin assessment.
- Wash face and neck.
- Pads need to be washed and changed. Pads must be kept clean and dry to protect skin integrity - wash with a mild soap, rinse, wring out excess water from pads, and let pads air dry. Collar shell can be wiped with a damp cloth when required.

****Frequency of each practice may vary across organizations. Clarify orders with MRP.**



Patient and Care Partner/Caregiver Education

- Must follow MRP's specific instructions for when and how to wear the collar, especially when sleeping, showering, and during certain activities.
- DO NOT drive while prescribed to wear the cervical collar. Your MRP will instruct you when you are allowed to drive.



Patient and Care Partner/Caregiver Education

- Must take care when walking as patients will not be able to see their feet.
- Must avoid flexion (head down), extension (head back), and rotation (head side to side) of the cervical spine.
- When moving from a lying to a standing position, patients must use their arm and leg muscles to keep their spine in neutral alignment.
- Must take care with eating – take smaller bites and chew each bite more thoroughly. Will need to adjust height of food for visualization as patient cannot move neck.



Photo used with permission from Aspen. Retrieved from [Aspen® Cervical Collar Set with Replacement Pads](#).

Patient and Care Partner/Caregiver Education

- Must follow MRP's instructions for the following:
 - When to shower and wash hair with the collar on (e.g., until incision has healed);
 - When the collar can be removed to shave.
- It is important that the patient does not move their neck while the collar is off. After showering, follow MRP orders for changing collar in an upright or supine position.
 - Patient may be able to change the collar independently. OR, another person may be needed to remove the collar, replace moist/soiled pads with clean and dry pads, and reapply the collar.
 - When allowed to remove the collar for shaving, keep neck in neutral alignment - do not move head up, down, or side to side. An electric shaver is recommended.

Patient and Care Partner/Caregiver Education

- Watch for reddened or broken skin under the collar. Skin breakdown can be caused by rubbing, pressure, or moisture. This may indicate that the collar does not fit properly or is not being worn correctly and requires adjustment.
- If the collar fits loosely, keeps riding up, is painful, or the patient has reddened or broken skin under the collar, the collar must be adjusted.

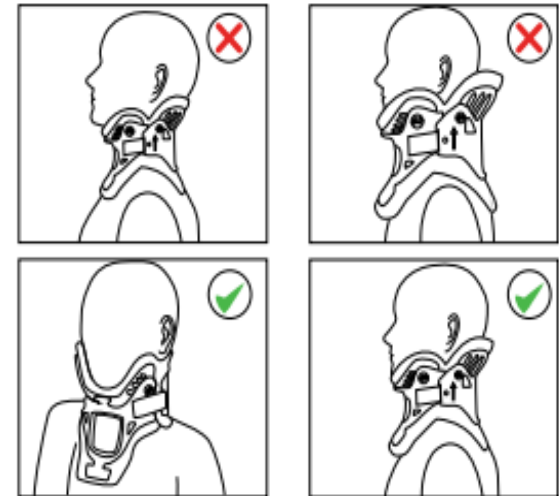


Photo used with permission from Ossur. Retrieved from [Miami J.](#)

Dressing Considerations

- If a patient would like to wear regular clothes, shirts/hoodies/sweaters that are zippered or button-up are easier to put on than pullovers.
- If wearing a pullover top, be sure the neck opening is large enough so it can easily slip over the head without moving the neck.
- The collar should be flush against the skin as much as possible to ensure proper fit.

Safety Considerations

- Remind the patient to inform their health care team if they experience any new or worsening weakness, numbness or tingling, and/or neck or back pain.
- Encourage ambulation as tolerated. Supervise the patient when ambulating if necessary. Make sure patient wears non-skid shoes and ambulates in non-cluttered areas.
- If the patient is sitting, ensure they are in a neutral, upright posture. Sit in a firm chair; avoid soft low chairs. Avoid sitting for prolonged periods of time.
- Is the patient on a proper supporting mattress for their spinal injury? Stable vs. Unstable spine patients will have different needs. If appropriate, also consider the need for a pressure relieving mattress.
- Follow MRP orders for allowed activities (e.g., walking).
- Patient should avoid strenuous activities (e.g., avoid heavy lifting of objects greater than 5 pounds).

Documentation

- Type and size of the cervical collar:
 - ***For Aspen® Vistas***, document the height setting since the collar is an adjustable collar based on neck height.
 - ***For Miami-J® Select***, document the height according to the height indicator mark since the collar is an adjustable collar based on neck height.
 - ***For Miami-J® 200L/200S/250/300/400/500***, document the position of the angulation buttons (two anterior and two posterior).
- Time and date of application.
- Results of the neurovascular checks, vital signs, neurological & respiratory status, skin integrity, etc.

Documentation (cont'd)

- Document patient pain status/comfort, use of any nonpharmacological and pharmacological interventions.
- Document collar fit and snugness.
- Document method of application/ removal/positioning, etc.
- Document all patient teaching/instructions provided.

Web-Links

Critical Care Services Ontario

[Neurosurgery - Critical Care Services Ontario](#)

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Services Ontario

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Cervical Collar Care and Management

2025 | Guides & Toolkits

The 'Cervical Collar Care and Management' document, developed by the provincial Neurosurgery and Education Outreach Network (NEON), provides information to assist Health Care Professionals (HCPs) across Ontario to care for patients who need a cervical collar. The resource provides information to assist the HCP to identify indications for cervical collar use, understand the different types of cervical collars, and maintain and address the complications that may arise with the use of a cervical collar. The resource also summarizes the importance of involving patients and their care partners in education and care of the collars.

 View PDF

****Please note that the previous version of this document was titled, "Care of Cervical Orthosis Devices and Collar Care." The title was changed in January 2025 to "Cervical Collar Care and Management."**

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