

SESLHD GUIDELINE COVER SHEET



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SUMMARY	This document outlines the appropriate use and application of soft (foam) cervical collar for suspected spine injury in the Emergency Department (ED).

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Department**

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Section 1 - Background

A **cervical collar** is an orthopaedic device that may be used to physically and consciously acknowledge the potential for c-spine injury. Although available devices may limit movement within the c-spine, no device has been shown to immobilise it completely. There is a lack of evidence for the efficacy of spinal immobilisation in the prevention of spinal cord injury (SCI). There is evidence however, that rigid collars can lead to significant complications and morbidity when used to immobilise the c-spine. These complications with rigid cervical collars include:

- patient discomfort
- pressure areas
- increased intracranial pressure
- increased neck pain
- causing/worsening SCI (e.g. in ankylosing spondylitis)
- impaired ventilation
- aspiration risk
- masking of neck/occipital injuries.

Section 2 - Principles

Soft cervical collars mitigate some of the issues associated with the prolonged application of more rigid collars. The cervical soft collar is a disposable single use device made from soft, open-cell foam plastic with a cotton stockinette cover and touch tape closure.

The aim of the soft (foam) cervical collar is to act as a marker for staff to apply spinal care principles whilst minimising equipment related adverse events.

In children, padding under the torso (dependent on size and age) may optimise the neutral position.

In adults, padding under the head (approximately 2cm) may optimise the neutral position.

If not contraindicated (e.g. pelvic, thoracolumbar spine fractures), the head of the bed should be elevated 30 degrees to aid comfort, swallowing and respiratory function.

Section 3 - Definitions

- C-Spine - Cervical Spine
- ED - Emergency Departments
- ICU - Intensive Care Unit
- NEXUS - Criteria for C-Spine Imaging
- SCI - Spinal Cord Injury

Section 4 - Inclusion & Exclusion Criteria & Management

Inclusion criteria

- Suspicion for a traumatic cervical spine injury with a Glasgow coma scale (GCS) of 15
- Suspicion for a traumatic cervical spine injury with an altered level of consciousness and no acute injury identified on CT C-Spine (eg fracture, dislocation, ligamentous disruption, paravertebral soft tissue swelling suggestive of ligamentous disruption, intervertebral disc bulging with impingement on spinal cord presumed to be acute, spinal cord trauma, epidural haematoma).

EXCLUSIONS

Surgical Airway

Penetrating neck trauma

Clinical indication of spinal cord injury (limb weakness/ deficit/priapism/neurogenic shock)

Radiological evidence of cervical spine bone injury

If a patient arrives via ambulance with **stiff neck collar**:

- transfer to ED bed
- apply padding under occiput (Adults) or under torso (paediatrics)
- expedite assessment and/or imaging
- ***if the patient is unlikely to undergo imaging +/- clearance within an hour, change to soft collar.***

If an **unconscious** patient arrives via ambulance with **stiff neck collar**:

- transfer to ED bed
- apply padding under occiput (Adults) or under torso (paediatrics)
- if cervical bony injury on CT – apply Philadelphia collar
- if **no cervical bony injury** – apply soft collar and lateral support (sandbags).

If a Patient **presents to ED with no collar**:

- does not meet NEXUS / c-spine clearance criteria
- apply padding under occiput (Adults) or under torso (paediatrics)
- apply soft collar –position patient supine on bed.

If a Patient has **clear spinal cord injury** (limb weakness / deficit) or **bony injury** found on imaging:

- apply **Philadelphia collar**
- apply padding under occiput (Adults) or under torso (paediatrics)
- await spinal surgery advice- orthopaedic or neurosurgical

Section 5 - Process of Applying a Soft Cervical Collar

Applying a soft cervical collar means continue spinal care precautions (log roll with inline stabilisation +/- sandbags)

5.1 Towel Padding Application



Figure 1



Figure 2

To optimise the neutral position a folded towel (height approximately 1-2 cm) can be placed underneath the adult patient's head (Fig.1) or the upper torso of the child patient (size and age dependent) (Fig 2).

- Explain procedure to patient and gain verbal consent, assess and document neurological status
- Maintaining spinal precautions, log roll patient into lateral position to allow sufficient space to position the folded towel
- Maintaining spinal precautions, log roll return the patient to supine position
- Ensure patient comfort and complete appropriate documentation.

5.2 Soft Collar Application

- Explain procedure to patient, assess and document neurological status
- Maintain c-spine precautions using two staff members (One - maintaining C-spine precautions, two - applying the collar)
- Remove stiff neck collar (pre-hospital) if required
- Ensure region to be covered by collar is free of debris and fluid, wounds are covered appropriately, jewellery removed
- Follow application of foam collar instruction below:

1. Gently align the patient's head to a neutral anatomical position or position of greatest comfort.

2. Measure the distance between the base of the chin and the suprasternal notch.



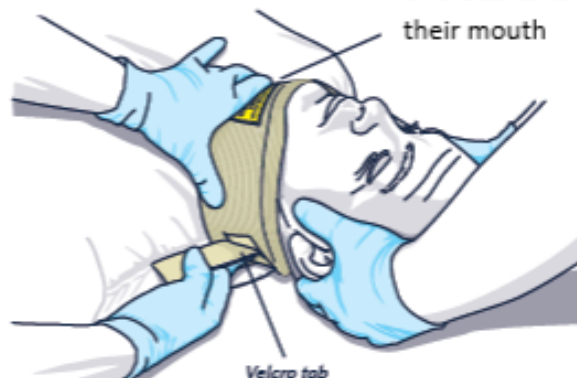
3. Select the appropriate size collar by comparing the patient's neck measurement to the width of soft collar's chin support.

4. Slide the collar under the patient's neck (right to left) until the adhesive Velcro strap is clearly visible.



6. Ensure the patient's chin rests on top of the collar and they are able to open their mouth

5. Mould the soft collar around patient's neck and secure the Velcro tabs.



Section 6 - Pressure Area Care

- Always ensure region to be covered by collar is free of debris and fluid, wounds are covered appropriately, jewellery removed prior to applying collar as this will contribute to skin breakdown
- Once a soft collar is applied, it must be removed and skin inspection attended every four hours to assess for pressure injuries and skin moisture
- A patient must be turned every 2-4 hours and pressure area care (PAC) attended as per their waterlow score / PAC nursing care plan
- Log roll with inline C Spine immobilisation must be attended throughout
- A patient with a soft collar fitted should have mobility orders documented in the clinical notes by the treating team.

Pressure Area Care is delivered according to [NSW Ministry of Health Policy Directive PD2021_023 - Pressure Injury Prevention and Management](#)

and

[CERVICAL COLLAR - PRESSURE INJURY SURVEILLANCE IN A PATIENT WITH A, AT ST GEORGE HOSPITAL \(SGH\) - SGH CLIN035 Clinical Business Rule](#)

Section 7 - Staff Education & Training

Soft cervical collar measuring, application and the principles of the device is covered in ED nursing orientation across all sites within SESLHD.

In addition, a mastery for measuring and applying a c spine collar is available on page 57 of the Transition to Practice Emergency Nursing Program participant's workbook.

Section 8 - References

[ACI - Use of foam collars for cervical spine immobilisation - Initial management principles \(nsw.gov.au\)](https://www.nsw.gov.au)

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[NSW Ministry of Health Policy Directive PD2021_023 - Pressure Injury Prevention and Management](#)

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Section 9 - Revision and Approval History

Date	Revision no:	Author and approval
June 2017	Draft	Processed by Executive Services for progression to SESLHD Clinical and Quality Council.
July 2017	Draft	Approved by Clinical and Quality Council.
October 2018	1	Minor review. Pressure injury links added. Processed by Executive Services.
September 2021	2	Minor review – Formatting, updating links / references, added inclusion criteria, changes to pressure area care guidelines (from 2 nd hourly to 4 th hourly skin checks), additional section on staff education & training added.
October 2021	2	Approved by Executive Sponsor.