



# Expert in my pocket

## CERVICAL SPINE IMMOBILISATION

### Cervical Spine Immobilisation



#### 1 Preparing the patient

- a. Explain the procedure to the patient and obtain consent.
- b. Ask an assistant to manually stabilise the patient's head in the midline position.
- c. Remove any clothing or jewellery which may interfere with the application of the collar.
- d. Size the collar according to the manufacturer's instructions and adjust the size of the collar.



#### 2 Performing the procedure

- a. Preform the collar to the curvature of the patient's neck.
- b. Apply the collar in accordance with the manufacturer's instructions. Minimise head movement at all times.
- c. Maintain the head in a neutral position with the top edge of the collar supporting the chin and occiput, and the lower edge resting on the trapezius muscle.
- d. Check to ensure that the collar is firm but not uncomfortable.



**Note:** the cervical collar assists to stabilise the cervical segment of the vertebral column. Other procedures – such as a vacuum mattress – are required to stabilise the entire vertebral column.



#### 3 Complications

- a. The device may impair the patient's ability to vomit. If this occurs, remove the device immediately and clear the airway.
- b. Excessive pressure created by a tight collar can produce pressure ulcers and restrict venous return by placing pressure over the jugular veins. This can increase intracranial pressure.



#### 4 Documentation

- a. Document the procedure and record neurological findings before and after collar application.

**Note:** Check the most recent resuscitation guidelines at [www.resus.org.au](http://www.resus.org.au)

#### References

1. Deasy C, Cameron P. Routine application of cervical collars – What is the evidence? *Injury*. 2011;42(9):841-2.
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4. Vaillancourt C, Stiell IG, Beaudoin T, Maloney J, Anton AR, Bradford P, et al. The out-of-hospital validation of the Canadian C-Spine Rule by paramedics. *Ann Emerg Med*. 2009;54(5):663-71.
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#### Background

Immobilisation of the cervical spine is performed when clinical findings or mechanism of injury leads to a suspicion of injury to the vertebral column or spinal cord.

Cervical spine immobilisation is a component of the full immobilisation of the vertebral column. Despite the name of the procedure, this technique restricts flexion, extension and rotation of the head, but does not fully immobilise the spine. Although this technique is commonly implemented in paramedic practice and similar health fields,<sup>1</sup> there is no evidence that the technique improves outcomes in cases of suspected spinal injury. There is however, evidence of harm associated with the implementation of spinal immobilisation procedures.<sup>2-3</sup> Spinal clearance algorithms such as NEXUS or the Canadian C-spine rule should be used to identify patients who may benefit from this procedure.<sup>4-5</sup>

#### Equipment required

- Full range of cervical collar sizes for adult and paediatric patients



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