



**REGION 11
CHICAGO EMS SYSTEM
PROCEDURE**

Title: Spinal Motion Restriction (SMR)
Section: Trauma Management
Approved: EMS Medical Directors Consortium
EMS Level: BLS/ALS

SPINAL MOTION RESTRICTION (SMR)

INDICATIONS

Traumatic injury with:

- Acutely altered level of consciousness (GCS < 15, evidence of intoxication)
- Midline neck or back pain and/or tenderness
- Focal neurological signs or symptoms (i.e. numbness or motor weakness)
- Severe or painful distracting injury (unreliable examination or assessment)
- For pediatric patients: torticollis (neck muscle spasm causing the head to tilt to one side)

CONTRAINDICATIONS

- Penetrating traumatic injury to the neck

EQUIPMENT

- Cervical collar
- Scoop stretcher or padded long backboard
- Ambulance cot

PROCEDURE

1. Apply personal protective equipment: gloves.
2. Limit motion of the spine by keeping head, neck, and torso in alignment.
3. Determine appropriately sized cervical collar.
4. Use fingers to measure the patient's lateral neck from the base of the shoulder to the bottom of the chin.
5. Adjust cervical collar based on measured neck size.
6. Apply cervical collar and secure it in place.
7. Assess cervical collar after application as it should not occlude mouth opening, obstruct airway, breathing, or be loose as to allow the chin to sink below the collar chin piece.



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8. If extrication is not required: Children in a booster seat and adults can be allowed to self-extricate. Place patient on ambulance cot. For infants and toddlers already strapped in a car seat with a built-in harness, extricate the child while strapped to the car seat.
9. If extrication is required: For infants and toddlers already strapped in a car seat with a built-in harness, extricate the child while strapped to the car seat. For other situations, use a padded long backboard or a scoop stretcher.
10. Reassess the patient. If head elevation is required, elevate 30 degrees and maintain neck/torso alignment.
11. Minimize flexion, extension, and rotation of the spine during patient transfers.
12. Padding can be used for pediatric patients or severe kyphosis to maintain SMR.
13. Secure patient to ambulance cot appropriately.