



Yolo County Emergency Medical Services Agency

Protocols

Revised Date: July 8, 2021

SPINAL MOTION RESTRICTION (SMR)

Adult

Pediatric

Indication

Patients with a mechanism of injury that has the potential to cause a spinal injury and who have 1 or more of the following may benefit from SMR:

- Neurological deficit
- Spinal pain or tenderness
- Unable to successfully complete a Motor/Sensory exam
- Altered mental status or evidence of intoxication
- A distracting painful injury (e.g. long bone extremity fracture)
- Complains of pain when patient tries to flex, extend, or rotate neck

Victims of penetrating trauma (stabbing/gunshot wounds) to the head, neck, and/or torso **do not require SMR**.

BLS

Perform a Spinal Assessment & Motor Sensory Exam to include:

- With the patient's spine supported to limit movement, begin palpation at the base of the skull at the midline of the spine
 - Palpate the vertebrae individually from the base of the skull to the bottom of the sacrum
- Assess for pain with movement of the neck (cervical flexion, extension, and rotation)
- Any abnormal neurological function in extremities (check all extremities):
 - Extend both wrists, open the hands and touch each finger to the thumb
 - Flex each foot down and up
 - Check for abnormal or absent sensation to any extremity.

If patient requires SMR:

- Apply rigid cervical collar
 - Alert and cooperative patients may be allowed to self-limit motion if appropriate, with or without a collar
- Self-extrication by patient is allowable if patient is capable
 - Allow ambulatory patients to sit on stretcher and then lie flat if possible or in position of comfort
- If extricated on a backboard, position backboard on stretcher then remove backboard by using a log roll or lift and slide technique
- Pediatric Patients in Car Seats:
 - Children restrained in a car seat with a high back may be immobilized and extricated in the car seat
 - If the decision is made to apply SMR to a patient in a car seat, ensure that a proper assessment of the patient's posterior is performed



Yolo County Emergency Medical Services Agency

Protocols

Revised Date: July 8, 2021

BLS *cont.*

- Helmet Removal:
 - Any type of helmet that requires manipulation of the head and neck to remove it from a trauma patient should be left in place. The airway may be managed through the mask/screen but should be removed if the airway cannot be managed and with the mask/screen in place. Be sure to pad around the helmet, neck, and shoulders to fill any gaps and maintain inline spinal motion restriction