

## 7.11 Spinal Motion Restriction

### INDICATION

Patients who present following decelerating or blunt force injury suspicious for head or neck trauma with any of the following should have Spinal Motion Restriction:

- Midline back or neck pain.
- Numbness, weakness or paresthesias of the extremities.
- Blunt and or penetrating injury to the head or neck. Penetrating trauma does not require SMR unless spinal injury is suspected.
- Altered mental status of unknown etiology with traumatic injury suspected.

**Spinal Motion Restriction is NOT indicated if the patient meets ALL the following criteria:**

- Age <65.
- No decrease or change in baseline mental or neurological status.
- No suspected or witnessed axial load injury to head.
- No numbness, weakness or paresthesias of the extremities.
- No significant distracting injuries.
- Reliable translation for any language barrier.
- No vertebral column injury noted on palpation.
- Patient able to perform motor/sensory exam without deficits:
  - Wrist or finger flexion (both hands), plantarflexion (both feet), dorsiflexion (both feet).
  - Check gross sensation in all extremities.
  - Check for parasthesias.

EMTs and Paramedics shall apply or direct application of SMR whenever extent of injury is in question or patient history is unreliable.

### PROCEDURE

1. Limit flexion, extension, rotation and distraction of spine.
2. Provide manual stabilization restricting gross motion.
3. Reduce gross movement of patient.
4. Prevent duplicating the damaging mechanism to spine.
5. Regularly assess sensory and motor function.
6. Obtain assistance (minimum 2-person procedure) to apply rigid cervical collar. Alert and co-operative patients may be allowed to self-limit motion, if appropriate, without cervical collar.

### NOTES

- Methods used to achieve Spinal Motion Restriction that are allowable include (less restrictive to more restrictive);
  - Lateral, semi-fowler's or fowler's position with cervical collar only,
  - Soft collars,
  - Pillows,
  - Mattress,

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- Children's car seats,
- KED, backboards with adequate padding, or
- Head immobilizers and straps.
- In the event that a patient meets inclusion criteria for SMR, but cannot or will not tolerate allowable methods, consider manual stabilization using additional rescuers, tools or techniques to achieve limited spinal motion during extrication and transport.
- Long spine boards are indicated only in patients who exhibit neurological deficits, decreasing level of consciousness or inability to be screened for discontinuation of spinal motion restriction.

**Once SMR has been applied to a patient, it may NOT be discontinued in the field.**