

4.5

Spinal Motion Restriction

EMT/ADVANCED EMT/PARAMEDIC STANDING ORDERS

- Routine Patient Care.
- Perform advanced spinal assessment (See [Advanced Spinal Assessment Protocol 6.0](#)) to determine if patient requires spinal motion restriction.
- Maintain manual in-line stabilization during assessment, unless patient is alert and spontaneously moving neck.
- Minimize spinal movement during assessment and extrication.
- A long backboard, scoop stretcher, vacuum mattress, or other appropriate full length extrication device may be used for extrication if needed. Do not use short board or KED device.
- Apply adequate padding to prevent tissue ischemia and minimize discomfort.

If patient requires Spinal Motion Restriction:

- Apply a rigid cervical collar.
- Self-extrication by patient is allowable if patient is capable.
- Allow ambulatory patients to sit on stretcher and then lie flat. (The "standing take-down" is eliminated.)
- Position backboarded patient on stretcher then remove backboard by using log roll or lift-and-slide technique.
- Situations or treatment priorities may require patient to remain on rigid vacuum mattress or backboard, including the multi-trauma patient, combative patient, elevated intracranial pressure (See also [Traumatic Brain Injury Protocol – Adult & Pediatric 4.7](#)), or rapid transport of unstable patient.
- With the patient lying flat, secure patient firmly with all stretcher straps and leave the cervical collar in place. Instruct the patient to avoid moving head or neck as much as possible.
- Elevate stretcher back only if necessary for patient compliance, respiratory function, or other significant treatment priority.
- If patient poorly tolerates collar (e.g., due to anxiety, shortness of breath, torticollis), replace with towel roll and/or padding.
- Patients with nausea or vomiting may be placed in a lateral recumbent position. Maintain neutral head position with manual stabilization, padding/pillows, and/or the patient's arm. See also [Nausea/Vomiting Protocol 2.11](#).

Pediatric Patients Requiring a Child Safety Seat

For pediatric patients requiring spinal motion restriction, transport in a child safety seat per [Pediatric Transportation Policy 8.12](#),

- Apply padding and cervical collar as tolerated to minimize the motion of the child's spine. Rolled towels may be used for very young children or those who do not tolerate a collar.
- Patient may remain in own safety seat after motor vehicle crash if it has a self-contained harness with a high back and two belt paths and is undamaged. If all criteria are not met, use ambulance's safety seat.
- If the patient requires significant care (e.g. airway management) that cannot be adequately performed in a car seat, remove the patient and secure him/her directly to the stretcher.



- Long backboards do not have a role for patients being transported between facilities. If the sending facility has the patient on a long backboard or is asking EMS to use a long backboard for transport, EMS providers should discuss not using a long backboard with the sending facility physician before transporting a patient. If a long backboard is used, it should be padded to minimize patient discomfort.
- Patients with only penetrating trauma do not require spinal motion restriction.
- Caution should be exercised in older patients (e.g. 65 years or older) and in very young patients (e.g. less than 3 years of age), as spinal assessment may be less sensitive in discerning spinal fractures in these populations.