

Spinal Assessment and Selective Immobilization Sample Guideline

Patients with blunt traumatic injuries with mechanism concerning for spinal injury should be assessed for spinal injury. Patients may have all spinal immobilization omitted if ALL of the following conditions apply:

- They are conscious, cooperative and able to communicate effectively with provider^{1,2,3}.
- There is no major mechanism for severe injury² (i.e. No prehospital trauma triage criteria to go to a high level trauma center.)
- Have no history of new or temporary neurologic deficit such as numbness or weakness in an extremity^{1,2,3}.
- Have no evidence of intoxication or altered mental status^{1,2,3,4}.
- Have no evidence of a distracting injury^{1,3} such as
 - Fractures
 - Major burns
 - Crush injuries
 - Severe or distracting pain
- Have no midline back or neck pain or tenderness upon palpation^{1,2,3}.

If all the above criteria are met, have patient move their neck 45° to either side of midline and if still no pain², no immobilization is indicated.



Spinal immobilization consists of keeping the head, neck and spine inline. The neck can be immobilized with a well fitted cervical collar, head blocks, blanket rolls or other immobilization techniques. Patients who are already walking or standing should be laid directly on the ambulance stretcher and secured to the stretcher with seatbelts. Back

¹ Hoffman JR et al. Validity of a set of clinical criteria to rule out injury to the cervical spine in patients with blunt trauma. *N Engl J Med* 2000; 343:94-99.

² Stiell IG et al. The Canadian C-spine rule for radiography in alert and stable trauma patients. *JAMA* 2001; 286:1841-1848.

³ Burton JH et al. A Statewide, Prehospital Emergency Medical Service Selective Patient Spinal Immobilization. *J Trauma* 2006; 61: 161-167.

⁴ Evaluation for evidence of intoxication: Ask "What medications did you take today? Have you had any alcohol? Have you had any recreational drugs?" Is there slurring of speech, dilated or constricted pupils, unsteady gait? Do they smell like alcohol or marijuana?

boards and scoop stretchers are designed and should only be used to extricate patients. Once extricated, patients should be taken off the back board or scoop stretcher and be placed directly on the ambulance stretcher.

Decisional patient's have the right to refuse aspects of treatment including spinal immobilization. If a patient refuses immobilization after being informed of possible permanent paralysis, do not immobilize them and document the patient's refusal in your medical record.

Patients with penetrating traumatic injuries should only be immobilized if a focal neurologic deficit is noted on physical examination (although there is little evidence of benefit even in these cases)⁵⁶.

⁵ Barkana Y., Stein M., Scope A., et al. Prehospital stabilization of the cervical spine for penetrating injuries of the neck - is it necessary? *Injury, Int. J. Care Injured* 2000; 31:305-309.

⁶ Stuke, Lance E.; Pons, Peter T.; Guy, Jeffrey S.; Chapleau, Will P.; Butler, Frank K.; McSwain, Norman E. Prehospital Spine Immobilization for Penetrating Trauma—Review and Recommendations From the Prehospital Trauma Life Support Executive Committee. *J Trauma* 2011; 71(3):763-770.