

TREATMENT:

- A. Treat per Universal Patient Care.
- B. Patients with penetrating trauma to the head, neck, or torso and no evidence of spinal injury should not be immobilized on a backboard.
- C. Appropriate patients to be immobilized with a backboard include those with:
 1. Blunt trauma and an altered level of consciousness
 2. Spinal pain or tenderness
 3. Neurologic complaint (e.g., numbness or motor weakness)
 4. Anatomic deformity of spine
 5. High energy mechanism of injury and any of the following:
 - i. Drug or alcohol intoxication
 - ii. Inability to communicate
 - iii. Distracting injury
- D. Perform range of motion test if patient does not meet above immobilization criteria. (See notes B)
- E. Document all findings of spinal evaluation in PCR if decision is made not to immobilize.
- F. Complete a secondary exam to include serial neurological status after immobilization.
- G. Treat pain per Pain Management protocol.

PEDIATRIC PATIENTS:

If using an adult backboard:

- a. Children may require extra padding under the upper torso to maintain neutral cervical alignment.
- b. Consider using a short-spine device (OSS, KED) to immobilize the patient prior to placing on the backboard.

NOTES & PRECAUTIONS:

- A. If any doubt always immobilize.
- B. Range of motion should NOT be assessed if the patient has midline spinal tenderness. The patient should touch his/her chin to chest, extend his neck (look up), and turn his head from side to side (shoulder to shoulder) without spinal pain. Do not assist the patient with range of motion during test.
- C. Consider immobilization in any patient with arthritis, cancer, dialysis or other underlying spinal or bone disease.
- D. Long spine boards (LSB) have both risks and benefits for patients and **have not** been shown to improve outcomes. The best use of the LSB may be for extricating the unconscious patient, or providing a firm surface for compressions. However, several devices may be appropriate for patient extrication and movement, including the scoop stretcher and soft body splints.
- E. **Spinal Precautions** can be maintained by application of a rigid cervical collar and securing the patient firmly to EMS stretcher, and may be the most appropriate for:
 - a. Patients who are found ambulatory at the scene
 - b. Patients who must be transported for an extended time, particularly prior to interfacility transport
 - c. Patients for whom a backboard is not otherwise indicated

- F. Whether or not a LSB is utilized, spinal precautions are STILL VERY IMPORTANT in patients at risk for spinal injury. Adequate spinal precautions may be achieved by placement of a hard cervical collar and ensuring that the patient is secured tightly to the stretcher, ensuring minimal movement and patient transfers, and manual in-line stabilization during any transfers.
- G. If any immobilization techniques cause an increase in pain or neurological deficits, immobilize patient in the position found or position of greatest comfort.
- H. Patients in the third trimester of pregnancy should have the right side of the backboard elevated six inches.
- I. If sports injury, immobilize patient per Sports Equipment Removal protocol.

KEY CONSIDERATIONS:

Concerning Mechanism of Injury—any mechanism that produced a violent impact to the head, neck, torso, or pelvis. Incidents producing sudden acceleration and/or deceleration, or lateral bending forces to the neck or torso. Any fall especially in elderly persons. Ejection from a motorized vehicle including motorcycles, scooters, etc... Victim of shallow water diving accident.

Distracting Injury—any injury that may have the potential to impair the patient's ability to appreciate other injuries. Examples include 1) Long bone injury 2) a large laceration, degloving injury, or crush injury; 3) large burns, or 4) any other injury producing acute functional impairment.

Inability to Communicate—any patient who, for reasons not specified above, cannot clearly communicate so as to actively participate in their assessment. Examples: speech or hearing impaired, those who only speak a foreign language, and small children.

Intoxication- Any patient who exhibits any of the following:

1. Difficulty with cognitive functions: difficulty answering questions, following commands or reasoning
2. Slurred speech
3. Unsteady gait
4. Difficulty ambulating or reported history of difficulty ambulating or patients who cannot get up on their own.