

I. General Considerations

- A. Whenever there has been multi-system trauma, or trauma about the head and neck, spine trauma should be assumed to be present until proven otherwise in the emergency department.
 - B. Be prepared to tip the entire spine board on its side should the patient vomit (the patient must be securely fastened to the board).
 - C. If the patient has a high level cord injury, breathing may be solely by use of the diaphragm. This can be readily assessed by watching the chest and abdomen. Avoid further compromise of breathing: do not place the patient in Trendelenburg (foot of board elevated) position.
 - D. While shock may be caused by spinal cord injury, always consider that internal bleeding may be present if shock is severe.
 - E. Respiratory problems are common with potential spine injury and interventions need to be carefully administered.
 - F. Pain in an alert patient may direct attention to the region of spinal trauma but absence of pain does not rule it out.
 - G. Any movement of any limb must be carefully noted and changes in the patient's condition communicated to the emergency department staff.
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II. History

Perform a focused history and physical exam with particular attention to:

- A. Does the patient have any pain, numbness or tingling anywhere?
 - B. Has this patient lost consciousness?
 - C. What time did the injury occur?
 - D. What was the mechanism of injury? What forces were involved?
 - E. Is the patient chemically impaired? (alcohol, drugs, etc.)
 - F. Has the patient moved himself or been moved?
 - G. Obtain the past medical history, including problems of high blood pressure, diabetes, pulmonary problems, cardiovascular disease.
 - H. What medications has the patient been, or is the patient supposed to be, taking (including over the counter medications)?
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III. Physical Exam

- A. Perform an initial assessment.
 - B. Perform a focused history and physical exam.
 - C. Is the patient breathing only with the diaphragm?
 - D. Assess the patient's neurological condition.
 - 1. Check pupils for size, symmetry, reactivity.
 - 2. Assess motor function. Is the patient moving all four extremities? Is there equal grip strength? Is there posturing?
 - 3. Is sensation to touch intact in all four extremities?
 - E. Are there signs of trauma which might have caused altered mental status/coma (e.g., head trauma, hematomas, raccoon eyes, Battle's Sign)?
 - F. Are there other injuries (e.g., hip or wrist fracture from fall)?
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IV. Treatment

{If other conditions are present, follow the appropriate protocol(s).}

Basic

- A. Establish an airway, maintain as indicated, suction as needed.

- B. Consider high concentration oxygen.
- C. Immobilize the spine.

Intermediate and Paramedic

- D. Secure IV access.

Paramedic

- E. *Consider use of nitrous oxide or narcotic pain management of medical direction's choice.*