

HEAD TRAUMA

The goal of pre-hospital treatment of head injuries is to prevent further neurological deterioration until definitive care can be provided. This is best done by maintaining an adequate airway, oxygenation, and prevention and treatment of hypotension combined with smooth, rapid transport to an appropriate facility with minimal on-scene time.

- A. Perform **Initial Treatment / Universal Patient Care Protocol** and follow the proper protocol for medical management based on clinical presentation.
- B. Maintain airway as indicated by **Airway Management Protocol 4901** with the following special considerations in patients requiring assisted ventilation:
 - 1. If signs of impending Central Nervous System herniation (increasing BP, bradycardia, decreasing GCS, dilation of one pupil, paralysis, and decerebrate or decorticate posturing) are present, then ventilate 12 - 20 breaths per minute to maintain end tidal CO₂ at 30 mm/Hg.
 - 2. If no signs of CNS herniation, ventilate 10 - 12 breaths per minute to maintain end tidal CO₂ at 35 - 40 mm/Hg.
- C. If no signs of shock or hypotension, maintain IV normal saline at KVO.
- D. Elevate head of bed 30 degrees above horizontal.
- E. Perform and document neurological status checks every five (5) minutes.
- F. If patient is confused or unconscious, consider checking serum glucose and treat as indicated in **Diabetic Protocol 4604**. Do not delay treatment or transport to check serum glucose but should be done as soon as possible.
- G. If patient develops seizure activity, refer to **Seizure Protocol 4603**.
- H. Monitor airway, vital signs, and level of consciousness repeatedly at scene and during transport; **status changes are important**.

Note:

- 1. When head injury patients deteriorate, first check for proper airway, adequate oxygenation, and adequate blood pressure.
- 2. Avoid hypoxemia and hypotension.