Spinal Immobilization

Pre-Medical Control
MFR/EMT/SPECIALIST/PARAMEDIC
Indications

1. Refer to the **Spinal Injury Assessment Protocol**

Specific Techniques

1. Cervical Immobilization Devices
    A. Cervical collar should be placed on patient prior to patient movement, if possible.
    B. If no collar can be made to fit patient, towel or blanket rolls may be used to support neutral head alignment.
2. Extrication Device/Short Backboard Procedure
    A. Short extrication devises may be indicated when patient condition is stable, and patient is in more of a sitting position than horizontal position.
    B. Patient's head and cervical spine should be manually stabilized.
    C. Rescuers should place patient in stable, neutral position where space is created to place extrication device or backboard behind patient.
    D. While the patient is supported, the extrication device or backboard is placed behind patient, and the patient is moved back to a secure position if necessary.
    E. The patient is secured to the extrication device or short blackboard device with torso straps applied before head immobilization.
        a. Head immobilization material should be placed to allow for movement of the lower jaw to facilitate possible airway management.
    F. Move the patient to supine position on a long backboard or equivalent.
    G. Patient is further immobilized on the long immobilization devise.
3. Emergency Patient Removal
    A. Indicated when scene poses an imminent or potential life threatening danger to patient and/or rescuers, (i.e. vehicle or structure fire).
    B. Remove the patient from danger while best attempt is made to maintain spinal precautions.
    C. Rapid Extrication is indicated when patient condition is unstable (i.e.: airway or breathing compromise, shock, unconsciousness, or need for immediate intervention).
4. Long Backboard Immobilization
    A. Indicated when patient requires spinal precautions.
    B. Cervical collar should be placed when indicated.
    C. Patient is log rolled, maintaining neutral alignment of spine and extremities.
        a. If log roll is not possible, patient should be moved to board while maintaining neutral alignment spinal precautions.

D. Patient is strapped to the board in a manner to minimize lateral or axial slide.
E. Head immobilization materials such as foam pads, blanket rolls may be used to prevent lateral motion. Pad under the head when feasible.

Special Considerations

1. Hypoventilation is likely to occur with spinal cord injury above the diaphragm. Quality of ventilation should be monitored closely with support offered early.
2. Spinal/neurogenic shock may result from high spinal cord injury. Monitor patient for signs of shock. Refer to **Shock Protocol.**
3. Immobilization of the patient wearing a helmet should be according to the **Helmet Removal Procedure.**
4. Manual spinal precautions must be initiated and continued until additional immobilization equipment is in place.
5. During patient movement or during rough transport, manual stabilization may need to be added to secure the patient.
6. Manual in line stabilization must be used during any procedure that risks head or neck movement, such as endotracheal intubation.
7. Document spinal stabilization techniques utilized.
8. Document the patient's neurologic status before and after establishing spinal precautions when possible.