SPINAL IMMobilization

1. Introduction:

1.1 Consider spine immobilization for a patient who sustains significant blunt trauma. Stabilize the patient until full spine injury assessment is complete, and then decide if immobilization is warranted. Use extra caution when evaluating high-risk patients (e.g. - elderly, osteoporotic, degenerative disorders, etc.)

1.2 The patient SHOULD NOT be spinal immobilized if all criteria are safely assessed and normal.

1.3 Victims of penetrating trauma (stabbings, gunshot wounds) to the head, neck, and/or torso SHOULD NOT be immobilized unless there is one or more of the following:
   - Obvious neurologic deficit to the extremities
   - Significant secondary blunt mechanism of injury (e.g.- fell down stairs after getting shot)
   - Priapism
   - Neurogenic shock
   - Anatomic deformity to the spine secondary to injury

1.4 For those patients who should be immobilized, consider the use of significant padding under the patient, especially the elderly. Patients may safely be packaged on their side if airway/vomit/drainage issues are present.

- If the immobilization process is initiated prior to assessment, STOP and perform spine injury assessment to determine best course of action.
- Studies have questioned the benefit of spine immobilization, and significant complications and delay because of immobilization. Alameda County EMS is supporting efforts to decrease unnecessary immobilizations in the field.
- Studies show that on-scene delay, respiratory/airway compromise of immobilizing penetrating trauma victims is detrimental, and may cause more harm than good to the patient. Penetrating trauma victims benefit most from rapid assessment and transport to a trauma center.

2. Pediatric Patients and Car Seats:

2.1 Infants restrained in a rear-facing car seat may be immobilized and extricated in the car seat. The child may remain in the car seat if the immobilization is secure and his/her condition allows (no signs of respiratory distress or shock).

2.2 Children restrained in a car seat (with a high back) may be immobilized and extricated in the car seat; however, once removed from the vehicle, the child should be immobilized.

2.3 Children restrained in a booster seat (without a back) need to be extricated and immobilized following standard spinal immobilization procedures.

3. Helmet removal: Safe and proper removal of the helmet should be done by two people following steps outlined in an approved trauma curriculum.
A Significant Mechanism refers to violent forces that are clearly capable of damaging the bony spinal column. In high-risk patients (e.g. - elderly, osteoporotic, degenerative disorders, etc.) less forceful mechanisms can cause significant injury.

A Reliable Patient is calm, cooperative, sober and alert without:
- Acute Stress Reaction
- Intoxication
- Altered Mental Status
- Significant Distracting Injuries
- Language Barrier

SPINAL PAIN/TENDERNES
- Palpate vertebral column thoroughly

MOTOR/SENSORY EXAM:
- Finger abduction (both hands)
- Wrist or finger extension (both hands)
- Plantarflexion (both feet AND both great toes)
- Dorsiflexion (both feet)
- Sharp/ dull sensations both upper/lower extremities
- Check for abnormal sensations to extremities(e.g. parathesias)