



Section 6: Adult Trauma Protocols

ADULT TRAUMA: SPINAL MOTION RESTRICTION- SMR

Maintain manual in-line spinal stabilization until completing a patient assessment

- **Patients with only penetrating trauma, regardless of whether deficits are present, should not be placed in SMR**
- Assume spinal motion restriction is indicated until proven otherwise
- When in doubt, utilize full spinal motion restriction

Patients exhibiting:

- Blunt trauma and altered level of consciousness
- Any level spinal pain/tenderness and/or significant findings (crepitus, deformity or other irregular findings during palpation of the spine)
- Neurological complaint (i.e. numbness, tingling, motor weakness, etc)
- High-energy mechanism of injury and the presence of:
 - Drug or alcohol impairment
 - Inability to communicate
 - Distracting injury
 - Inability to ambulate

YES →

Full Spinal Motion Restriction

- A variety of methods can be used to achieve full SMR. Next page of the guideline outlines some acceptable methods

NO ↓

Patients exhibiting:

- **Cervical pain/tenderness** during palpation without neurological findings
- Patients must have:
 - Normal level of consciousness (GCS = 15)
 - Ability to communicate
 - Ability to ambulate
 - No drug or alcohol impairment
 - No distracting injuries

YES →

Limited Spinal Motion Restriction

- A variety of methods can be used to achieve limited SMR. Next page of the guideline outlines some acceptable methods

NO ↓

Patients exhibiting:

- **No spine tenderness** or anatomic abnormality
- Patients must have:
 - Normal level of consciousness (GCS = 15)
 - Ability to communicate
 - Ability to ambulate
 - No drug or alcohol impairment
 - No distracting injuries

YES →

No Spinal Motion Restriction is indicated

- Special considerations are listed on the next page of the guideline. Review special considerations that may apply

High Risk Factors:

See bottom High Risk Factors at the bottom of next page



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ADULT TRAUMA: SPINAL MOTION RESTRICTION- SMR-Cont.

Penetrating Trauma without other mechanism of injury (with or without deficits) - Spinal Motion Restriction not indicated

Appropriate full spinal motion restriction can be achieved using ANY one of the following options:

- Cervical collar or towels and blankets minimizing the movement of the cervical spine AND:
 - A long backboard or Reeves stretcher (with sheet under the patient) with voids padded appropriately secured with a minimum of three straps OR
 - A vacuum mattress (with sheet under patient) molded to patient's body to minimize motion OR
 - Laying supine on a firm mattress as warranted by assessment, provided efforts are made to reduce spinal motion

In cases where there is concern that full SMR increases pain or symptoms, secure in a position of comfort (with or without c-collar, long board, etc.)

Providers must document pertinent positive and/or negative findings supporting the above decision

High Risk/Suspicion

- Document pertinent positive and/or negative findings supporting the need for full SMR
- If clinical indications warrant (i.e. respiratory distress), may place patient with longboard or Reeves in reverse Trendelenberg position up to 30 degrees. Pad voids below device.

Appropriate cervical motion restriction can be achieved using ANY one of the following options:

- Cervical collar or towels and blankets minimizing the movement of the cervical spine
- Patient's may be transported in a supine or semi-fowler's position depending on the individual patient need

Providers must document pertinent positive and/or negative findings supporting the above decision

Moderate/Low risk/Suspicion

- Document pertinent positive and/or negative findings supporting the need for limited SMR

Consider High Risk Factors:

- Patients \geq 65 years of age, specifically patients with obvious head trauma (hematoma, lacerations, abrasions, etc.), consider cervical motion restriction
- Osteoporosis or ankylosing spondylitis (inflammatory disease which can fuse the spine, reducing flexibility)
- Chronic steroid use
- Axial loading
- Inability to ambulate

EMS Provider Judgment:

- If unsure of appropriate level of SMR, always make determination to protect the patient
- Evaluate SMR patients before and after restriction and document