

TMRC to consider prehospital antibiotics for open fractures.

Musculoskeletal Injuries

Adult & Pediatric

Before June 2023 TRMC Meeting

ORDERS - ADULT & PEDIATRIC

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- Routine Patient Care.
- Manually stabilize the injury.
- Control bleeding, see [Hemorrhage Control Protocol 4.4](#).
- Remove obvious debris, irrigate open wounds with saline solution, and cover with moist sterile dressing.
- Assess CSMs distal to injury before and frequently after immobilization.
 - Splint extremity as required.
 - Consider traction splinting for isolated adult and pediatric mid-shaft femur fractures, do not delay transport unnecessarily.
 - For pain relief apply ice and elevate.
- In a patient with a high risk mechanism of injury see [Spinal Injury Protocol 4.7](#).
- Stabilize suspected pelvic fractures with commercial device (preferred) or bed sheet.

ADVANCED EMT AND PARAMEDIC STANDING ORDERS – ADULT & PEDIATRIC

A/P

- Assess pain level and consider pain control measures, see [Pain Management Protocol 2.16](#).
- Administer fluids per [Shock – Traumatic Protocol 4.6](#).

EMT/ADVANCED EMT/PARAMEDIC STANDING ORDERS- ADULT & PEDIATRIC

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- For impaled objects of the extremities, consider removal of the object unless removal will cause significant damage and/or uncontrolled hemorrhage.
- For dislocated patella, shoulder, or digits from indirect force:
 - Attempt to reduce if evacuation will be prolonged, dangerous, or painful. (Nationally recognized training required to perform these procedures)
- For open/compound fractures consider:
 - Adult: Ceftriaxone 1 gram IV/IM, if available. (Advanced EMT/Paramedic only)
 - Pediatric: Ceftriaxone 50 mg/kg IV (maximum dose 1 gram) over 30 minutes, if available. (Paramedic only)
 - See reconstitution reference in the [Medication Formulary](#)
- For musculoskeletal pain consider:
 - Adult: Ibuprofen 400 – 600 mg or acetaminophen 325 – 650 mg by mouth; repeat every 6 hours as needed, not to exceed 3000 mg in 24 hours.
 - Pediatric: Ibuprofen or acetaminophen per [Pediatric Color Coded Appendix 3](#).



NEVER MIX ceftriaxone with lactated ringers or plasmalyte, calcium in these solutions can cause precipitation and crystallization.



For dislocations due to direct impact, such as falls, the injury is more likely to be complicated by a fracture. Reducing these involves more risk. Splinting in place and urgent evacuation is ideal.

PEARLS:

- Use ample padding when splinting possible fractures, dislocations, sprains, and strains. Elevate injured extremities, if possible. Consider the application of a cold pack for 30 minutes.
- Musculoskeletal injuries can occur from blunt and penetrating trauma. Fractures of the humerus, pelvis and femur, as well as fractures or dislocations involving circulatory or neurological deficits, take priority over other musculoskeletal injuries.
- Hip dislocations, pelvic, knee, and elbow fracture / dislocations have a high incidence of vascular compromise.
- Lacerations should be evaluated for repair within 6 - 12 hours.
- Blood loss may be concealed or not apparent with extremity injuries.