





Initial Date:8/31/2023

Revised Date:

Oakland County Medical Control Authority
TRAUMA AND ENVIRONMENTAL
SOFT TISSUE AND ORTHOPEDIC INJURIES

Section 2-5

Soft Tissue & Orthopedic Injuries

1. Follow **1.1 General Pre-hospital Care Protocol**.
2. Pediatric patients (≤ 14 years of age) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
3. Control bleeding (refer to **2.13 Bleeding Control (BCON)- Procedure Protocol**)
 - A. Utilize direct pressure.
 - B. Consider early tourniquet use (refer to **7.22 Tourniquet Application- Procedure Protocol**).
 - C. Consider MCA approved hemostatic agents and hemorrhage control devices.
 - D. Consider use of pressure dressings with deep wound packing.
 - E. Consider pelvic binding for suspected unstable pelvic fracture.
4. For uncontrolled bleeding with hemorrhagic shock see **2.14 Hemorrhagic Shock-Treatment Protocol**
5. If appropriate, maintain spinal precautions for patient per **2.6 Spinal Injury Assessment-Treatment Protocol**.
6. Assess pain on 1-10 scale and treat per **7.13 Pain Management-Procedure Protocol**.
7. Immobilize/splint orthopedic injuries as appropriate.
 - A. Special Considerations
 - i. Consider traction splinting for closed femur fractures (excluding hip/femoral neck).
 - ii. Straighten severely angulated fractures if distal extremity has signs of decreased perfusion.
 - iii. Evaluate and document neurovascular status before and after splinting.
8. Partial/complete amputations, major soft tissue injuries (e.g., mangled extremity) and open fractures.
 - A. Control bleeding as above
 - B. Cover wounds with sterile dressings moistened with sterile solution.
 - C. Splint extremity.
 - D. Recoverable amputated parts should be brought to hospital as soon as possible.
 - E. Wrap amputated part in sterile dressing moistened with sterile solution. Seal in a plastic bag and, if available, place bag in container of ice and water. DO NOT place part directly on ice.
 -  F. Obtain IV access per **7.23 Vascular Access and IV Therapy-Procedure Protocol**.
 -  G. Administer antibiotics (per MCA selection).

MCA Selection for Antibiotics

No antibiotic selection

Ceftriaxone Slow IV Push: 2gm diluted with 20ml NS

1. Adult: 2 gm (diluted) slow IVP 3-5 min



2. Pediatrics > 2 months of age:

a. Administer diluted dose according to MI MEDIC cards.

b. If MI MEDIC cards are not available, administer 50 mg/kg (diluted) slow IVP 3-5 min (Maximum dose 2 gm)

Ceftriaxone Infusion: Diluted dose added to 100 mL NS bag

1. Adult: 2 gm (diluted) added to 100 mL NS bag. Infuse over 15-30 min



2. Pediatrics \geq 7 years of age:

a. Ceftriaxone Infusion according to MI MEDIC cards

b. If MI MEDIC cards are not available, add 50 mg/kg (diluted) to 100 mL NS bag. Max dose 2 gm. Infuse over 15-30

Cefazolin Slow IV Push: 2 gm diluted with 20 ml or NS,

1. Adults: 2 gm (diluted) slow IVP 3-5 min



2. Pediatrics:

a. Administer diluted dose according to MI MEDIC cards.

b. If MI MEDIC cards are not available, administer 30 mg/kg (diluted) slow IVP 3-5 min (Maximum dose 2 gm)

Cefazolin Infusion. Diluted dose added to 100 mL NS bag

1. Adult: 2 gm (diluted), added to 100 mL bag of NS. Infuse over 15-30 minutes.



2. Pediatrics \geq 7 years of age:

a. Cefazolin Infusion according to MI MEDIC cards.

b. If MI MEDIC cards are not available, add 30 mg/kg (diluted) to 100 mL NS bag. Max dose 2 gm. Infuse over 15- 30 minutes.

H. Frequent monitoring of circulation, sensation, and motion distal to the injury during transport.

9. For severe crush injuries, refer to **2.4 General Crush Injury-Treatment Protocol.**



10. Impaled objects are left in place and stabilized. Removal of impaled objects is only with approval of Medical Control.



11. Follow MCA transport protocol.

12. Provide pain management per **7.13 Pain Management-Procedure Protocol.**

Protocol Source/Reference: Michigan 2.5 Soft Tissue and Orthopedic Injuries; Version 8/11/23.

Medication Reference

Cefazolin

Ceftriaxone