

	1302	Trauma Care
Nor-Cal EMS Policy & Procedure Manual		Treatment Guidelines
Effective Date: 03/01/2021		Next Revision: 03/01/2024
Approval: Jeffrey Kepple MD – MEDICAL DIRECTOR		SIGNATURE ON FILE

**Authority:** Health and Safety Code Division 2.5, California Code of Regulations, Title 22, Division 9.

See Trauma Decision Scheme  
 Assess ABC's & Hemorrhage control if necessary  
 History and Physical exam (LS-Consider Tension Pneumothorax)  
 Vital Signs  
 Oxygen: Titrate to SpO2 to 94%  
 Airway control as appropriate  
 Initiate Spinal Motion Restriction as appropriate  
**Keep patient warm**

Life threatening blood

**To Extremity:**  
 Apply commercial tourniquet proximal to bleeding  
 If bleeding continues consider placing a second tourniquet

**To areas not amenable to tourniquet:**  
 Consider Hemostatic dressing use  
 Pack wound and apply direct pressure

**Package for rapid transport and transport ASAP ideally less than 10 minutes**

Ensure trauma notifications as appropriate continue to evaluate for signs of instability

ALS

Establish IV / IO  
 ECG

Patient systolic BP less than 90  
 Consider TXA  
 Titrate warmed fluid bolus  
 To keep systolic BP above 90

If patient systolic bp greater than 90  
 Consider Pain management protocol

- Trauma notes:**
- Use pain management protocol as appropriate
  - Stabilize impaled objects in place
  - Warming measures to be used regularly
  - Refer to SMR protocol as needed
  - Consider Anxiety/Behavioral protocol as needed

- Traumatic arrest care:**
- See **Determination of Death protocol**
  - Asystole or PEA less than 40 terminate efforts
  - Consider bilateral needle thoracostomies if chest trauma or suspected tension pneumothorax
  - Otherwise treat with **Pulseless Arrest protocol**

**TXA:**  
 Mix 1 gram into a 100ml bag of NS or D5 give over 10 minutes

**Indications:**  
 (Greater than 15 years of age **AND** within 3 hours of the injury)  
 Blunt or penetrating traumatic injury with signs/symptoms of hemorrhagic shock: including SBP of less than 90.  
 Early or Impending hemorrhagic shock- consider obtaining Physician order

**Contraindications:**  
 Less than 15 years of age, greater than 3 hours from injury, suspected spinal shock or isolated head injury

### **Pelvic Binder use:**

Consider if high energy trauma suspicious for pelvic fracture and any one (1) of the following:

- Noted crepitus to iliac crest
- Genital/perineal edema
- Groin pain
- Rectal, Vaginal perineal bleeding
- GCS less than 13
- Hemodynamically unstable

### **Amputation Care:**

- Remove gross contamination
- Wrap in dry sterile dressing
- Place in plastic bag on ice/ cold packs
- Transport amputated part with the patient
- Consider Air medical services
- DO NOT soak in saline or place directly on ice

### **Crush injury care:**

**Generally greater than 4 hours of entrapment (Can be 1 hour in severe crush situation)**

#### **Before release of the crush mechanism:**

- Establish an IV/IO x2 and give a 30ml/kg bolus

#### **Treatment**

- Treat pain via pain management protocol
- Maintain systolic BP greater than 90 mmhg (Push Dose Epi as necessary)

#### **Consider EARLY Base hospital contact for any sign hyperkalemia (peaked T or Wide QRS):**

- Albuterol 5mg (nebulized) repeat until arrive at hospital
- Calcium 1 gram
- Sodium Bicarbonate 1 mEq/kg (Separate line from other medications / or flush well)

### **Suspected Tension Pneumothorax Care: Perform Needle Thoracostomy**

Absent or diminished lung sounds with any of the following:

- Hypotension
- Spo2 less than 94%
- Penetrating injury to the thorax
- Traumatic cardiac arrest

Approved sites:

Mid Clavicular line in the 2<sup>nd</sup> intercostal space

Mid Axillary line in the 4<sup>th</sup> or 5<sup>th</sup> intercostal space