

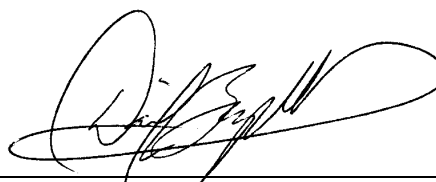
EL DORADO COUNTY EMS AGENCY PREHOSPITAL PROTOCOLS

Effective: July 29, 2013

Reviewed: N/A

Revised: July 2013, 2016, 2018

Scope: BLS/ALS – Adult



EMS Agency Medical Director

CRUSH SYNDROME/SUSPENSION INJURIES

ADULT

BLS TREATMENT

ABCs / ROUTINE MEDICAL CARE –be prepared to support ventilation with appropriate airway adjuncts.

FULL SPINAL PRECAUTIONS, if indicated.

Administer high flow oxygen via non re-breather mask.

Crush Injuries-Splint the effected limb(s) at heart level.

Maintain body temperature.

PROTOCOL PROCEDURE: flow of protocol presumes patient has had a full extremity (or more) crushed, pinned, or otherwise immobile with severely impaired circulation for **at least two (2) hour** or presumes patient been suspended for at least (10) minutes and is unconscious. It is advisable in these situations for BLS personnel to **wait for ALS personnel** before attempting extrication. **Early notification to the hospital is essential for proper triage and a notification of surgical personnel.**

ALS TREATMENT

PRE-EXTRICATION:

CONSIDER AIR AMBULANCE RESPONSE TO SCENE

EKG- Apply and continuously monitor patient's cardiac rhythm.

NORMAL SALINE - Establish 2 large bore IVs via blood administration or macro drip tubing. Use IO if unable to establish IV. **Give 20 mL/kg IV/IO bolus**, prior to release of compression. If patient is in shock or is compensating for impending shock, refer to SHOCK protocol.

PAIN MANAGEMENT – As appropriate, refer to Formulary.

IMMEDIATELY BEFORE EXTRICATION (IF POSSIBLE):

ALBUTEROL -Crush Injury Only - 5.0 mg in 6 ml NS via nebulizer. Run continuously before and after extrication.

SODIUM BICARBONATE – 1 mEq/kg up to 100 mEq IVP/IO (Flush line with NS before and after administration).

POST –EXTRICATION: Crush Injury and Suspension injuries

RAPID TRANSPORT – For Suspension injuries keep the patient in the semi-Fowler's position keeping the upper body at a 30–40-degree angle, then slowly bringing them to a fully supine position in 30–45 minutes.

CALCIUM CHLORIDE – If suspected hyperkalemia (Compression \geq 1 hr or suspension greater than ten minutes) give 1 gm IV/IO slowly over 5 minutes. Repeat at same dose if symptoms persist. (Flush line with NS before and after administration).

NOTE: Do not run Sodium Bicarbonate and Calcium Chloride concurrently. Either flush the line well or use a separate line.



PEDIATRIC**BLS TREATMENT**

ABCs / ROUTINE MEDICAL CARE – Be prepared to support ventilation with appropriate airway adjuncts.

FULL SPINAL PRECAUTIONS, if indicated.

Administer high flow oxygen via non re-breather mask.

Splint the effected limb(s) at heart level.

Maintain body temperature.

PROTOCOL PROCEDURE: Flow of protocol presumes patient has had their lower extremities/pelvis/torso crushed, pinned, or otherwise immobile with severely impaired circulation for **at least two (2) hours**. It is advisable in these situations for BLS personnel to **wait for ALS personnel** before attempting extrication. **Early notification to the hospital is essential for proper triage and notification of surgical personnel.**

ALS TREATMENT**PRE-EXTRICATION:**

CONSIDER AIR AMBULANCE RESPONSE TO SCENE

NORMAL SALINE – Establish IV or IO. Refer to shock protocol if patient is in shock.

PAIN MANAGEMENT – As appropriate, refer to Formulary.

CONTACT BASE STATION- For treatment determination and for early notification of destination and surgical personnel.

FLUID BOLUSES (May be ordered) – Give initial bolus of 20 mL/kg. If suspected history of volume loss and no improvement with initial bolus give additional fluid boluses at 20 mL/kg to a Max. of 60 mL/kg.

IMMEDIATELY BEFORE EXTRICATION (IF POSSIBLE):

ALBUTEROL* - 5.0 mg in 6 ml NS via nebulizer. Run continuously before and after extrication.

SODIUM BICARBONATE – 1 mEq/kg up to 100 mEq IVP/IO (Flush line with NS before and after administration).

POST –EXTRICATION:

RAPID TRANSPORT - As soon as possible.

BASE PHYSICIAN ORDER ONLY– If suspected hyperkalemia (Compression ≥ 4 hrs and: absent P waves, Peaked T waves, and/or prolonged QRS) CALCIUM CHLORIDE 20 mg/kg IV/IO push over 1 minute may be ordered. Repeat at same dose if symptoms persist. (Flush line with NS before and after administration).

NOTES:

* Use 2.5 mg of Albuterol in 3 mL of NS/SW if patient is < 2 years old.

Do not run Sodium Bicarbonate and Calcium Chloride Concurrently. Either flush the line well or use a separate line.