

**Michigan**  
**Adult Treatment**  
GENERAL CRUSH INJURY

Date: October 1, 2014

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### ***General Crush Injury***

This protocol should be considered when the patient has been entrapped at the scene for more than one hour, one or more full extremities trapped by an object capable of causing a crush injury, including machinery, dirt, rock, and rubble or there is entrapment of patient with history of previous cardiac or renal disease or dialysis treatment.

**Crush Syndrome** should be suspected in patients with entrapment/compression of greater than one hour, especially when a large muscle mass/group is involved. Treatment of the patient at risk for Crush Syndrome ***should begin before the patient is removed when practical.***

#### **Pre-Medical Control**

MFR/EMT/SPECIALIST/PARAMEDIC

1. Follow General Trauma Protocol, identify and treat life threats.
2. Assess for signs of Compartment Syndrome or Crush Syndrome.
3. Use tourniquet as indicated (see **Tourniquet Application** procedure).

PARAMEDIC

4. Establish large bore IV(s) and infuse one (1) to two (2) liters of Normal Saline ***just prior to removal of patient when practical.***
5. Treat patient pain per the pain management protocol. Fentanyl is preferred to morphine.
6. Initiate cardiac monitoring and assess for hyperkalemia, i.e. wide QRS or peaked T waves. Perform and transmit a 12-Lead ECG if conditions allow.
7. Administer oxygen to patient if environment allows.
8. Administer Sodium Bicarbonate 100 mEq IVP prior to extrication and 50 mEq/hr IVBP or slow IVP if extrication is prolonged and hyperkalemia is suspected.
9. Consider Albuterol 2.5 mg via NMT (nebulized mist treatment) during extrication process.
10. Administer Calcium Chloride 1 gram slow IVP over 5 minutes after extrication if hyperkalemia is suspected – T waves become peaked, if QRS widens, or if hypotension develops.

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