

<b>Crush Injury/Syndrome</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Perform spinal precautions as indicated Determine Potential vs. Actual Crush Syndrome Administer oxygen as indicated Maintain body heat	
<b>ALS Standing Orders</b>	
Potential for Crush Syndrome <ul style="list-style-type: none"> <li>• IV/IO access</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> </ul>	
<b>Crush Syndrome</b> <ul style="list-style-type: none"> <li>• Initiate 2<sup>nd</sup> IV/IO access</li> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 1 Liter</li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO mix – 1 mEq/kg                             <ul style="list-style-type: none"> <li>• Added to 1<sup>st</sup> Liter of Normal Saline</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ Nebulizer – 5 mg/6 mL                             <ul style="list-style-type: none"> <li>• Repeat as needed</li> </ul> </li> </ul> </li> <li>• <b>Pain Control</b>– Per Policy 705.19</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> <li>• For cardiac dysrhythmias:                             <ul style="list-style-type: none"> <li>○ <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>• IV/IO slow push – 1 g over 1 min</li> </ul> </li> </ul> </li> </ul> For continued shock <ul style="list-style-type: none"> <li>• <b>Repeat Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 1 Liter</li> </ul> </li> </ul> For persistent hypotension after fluid bolus: <ul style="list-style-type: none"> <li>• <b>Epinephrine 10 mcg/mL</b> <ul style="list-style-type: none"> <li>○ IV/IO slow push - 1 mL (10 mcg) every 2 minutes</li> <li>○ Titrate to SBP of greater than or equal to 90 mm/Hg</li> </ul> </li> </ul>	<b>Crush Syndrome</b> <ul style="list-style-type: none"> <li>• Initiate 2<sup>nd</sup> IV/IO access if possible or establish IO</li> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 20 mL/kg</li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO mix– 1 mEq/kg                             <ul style="list-style-type: none"> <li>• Added to 1<sup>st</sup> Normal Saline bolus</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ <b>Patient ≤ 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 2.5 mg/3 mL                                     <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> <li>○ <b>Patient &gt; 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 5 mg/6 mL                                     <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> </ul> </li> <li>• <b>Pain Control</b>– Per Policy 705.19</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> <li>• For cardiac dysrhythmias:                             <ul style="list-style-type: none"> <li>○ <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>• IV/IO slow push – 20 mg/kg over 1 min</li> </ul> </li> </ul> </li> </ul> For continued shock <ul style="list-style-type: none"> <li>• <b>Repeat Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 20 mL/kg</li> </ul> </li> </ul> For persistent hypotension after fluid bolus: <ul style="list-style-type: none"> <li>• <b>Epinephrine 10 mcg/mL</b> <ul style="list-style-type: none"> <li>○ IV/IO slow push - 0.1 mL/kg (1 mcg/kg) every 2 minutes</li> <li>○ Max single dose of 1 mL or 10 mcg</li> <li>○ Titrate to SBP of greater than or equal to 80 mm/Hg</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
Consult with ED Physician when orders are needed for interventions within scope but not addressed in policy	
Additional Information: <ul style="list-style-type: none"> <li>• Potential Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for 2 hours or less.</li> <li>• Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for greater than 2 hours.</li> <li>• Dysrhythmias are usually secondary to Hyperkalemia. ECG monitor may show: Peaked T-waves, Absent P-waves, widened QRS complexes, bradycardia</li> <li>• Calcium Chloride and Sodium Bicarbonate precipitate when mixed. Strongly consider starting a second IV (if feasible) for administration of Calcium Chloride</li> </ul>	

Effective Date: June 1, 2024  
Next Review Date: February 28, 2026

Date Revised: February 10, 2022  
Last Reviewed: February 8, 2024



VCEMS Medical Director