

# CALCIUM CHLORIDE

<b>DRUG CLASSIFICATION</b>	Calcium Salt; Electrolyte Beta-Blocker Toxicity Antidote Calcium-Channel Blocker Toxicity Antidote
<b>MECHANISM OF ACTION</b>	The dissociation of Calcium Chloride in water provides normal constituents of calcium and chloride ions for maintenance of balance between intake and output mechanisms. In the presence of hyperkalemia, the influx of calcium assists with moderation of nerve and muscle performance via action potential excitation threshold regulation.
<b>CLINICAL INDICATIONS</b>	Dialysis or Renal-Failure Emergency with Clinical Signs of Hyperkalemia Dialysis or Renal-Failure Emergency in the Presence of Cardiac Arrest Known or Suspected Beta-Blocker or Calcium-Channel Blocker Toxicity Crush Syndrome Trauma with Prolonged Entrapment and Signs of Hemodynamic Instability
<b>STANDARD CONTRAINDICATIONS</b>	Hypersensitivity to Calcium Chloride or Relative Components Known or Suspected Conditions Associated with Hypercalcemia Known or Suspected Digoxin Toxicity
<b>POTENTIAL ADVERSE EFFECTS</b>	Bradycardia / Arrhythmia / Hypotension / Syncope / Hot-Flash / Chalky Taste / Extravasation
<b>GENERAL RISKS &amp; PRECAUTION</b>	<b>1)</b> Rapid administration may be accompanied by a moderate fall in blood pressure as well as syncope due to peripheral vasodilation effects. <b>2)</b> Use with extreme caution in the presence of severe hypokalemia due to the risk of acutely higher serum calcium and life-threatening arrhythmias. <b>3)</b> For concurrent use with Sodium Bicarbonate, utilize separate IV/IO access lines for administration if possible; otherwise, ensure that any shared access line is adequately flushed between therapies to avoid a precipitation / crystallizing reaction of the two medications. <b>4)</b> Calcium chloride should be used cautiously, if at all, in patients with vitamin D toxicity or hyperparathyroidism. <b>5)</b> Consider hyperkalemia with wide complex, bizarre appearance of QRS complex, and bradycardia. Give Calcium Chloride or Gluconate in addition to Sodium Bicarbonate if hyperkalemia suspected.
<b>PROTOCOL INDEX</b>	Dialysis / Renal Failure (AM-3) Crush Syndrome Trauma (TB-3) Overdose / Toxic Ingestion (TE-7)

## MEDICATION ADMINISTRATION

### ADULT

### PEDIATRIC

**Systemic Signs of Crush Syndrome with Prolonged Entrapment > 2 Hours**  
1 g [IV/IO]; Administer over 2-3 minutes.

**Known or Suspected Beta Blocker or Calcium Channel Blocker Toxicity**  
1 g [IV/IO]; Administer over 2-3 minutes.

**Renal Crisis in the Presence of Cardiac Arrest**  
1 g [IV/IO]

**Renal Crisis with SBP  $\geq$  90 mmHg and ECG Evidence of Hyperkalemia**  
1 g [IV/IO]

**Systemic Signs of Crush Syndrome with Prolonged Entrapment > 2 Hours**  
20 mg / kg [IV/IO]; Administer over 2-3 minutes.

**Known or Suspected Beta Blocker or Calcium Channel Blocker Toxicity**  
20 mg / kg [IV/IO]; Administer over 2-3 minutes