

F. Calcium Chloride

- I. Classification
 - Electrolyte
- II. Actions
 - Actively competes with potassium at cardiac and neuromuscular receptor sites
 - Restores myocardial conduction in presence of hyperkalemia
 - Increases myocardial contractility (inotropy)
- III. Indications
 - Cardiac arrest associated with hyperkalemia (elevated potassium)
 - Calcium channel blocker overdose
 - Bradycardia due to calcium channel blocker overdose or hyperkalemia (i.e. missed dialysis).
- IV. Contraindications
 - Cardiac arrest not associated with above indications
 - Should be avoided in patients on digoxin.
- V. Adverse Effects
 - Not significant in above indications
- VI. Administration
 - A. Adult
 - 1 gm (1000 mg) slow IV/IO over 60 seconds.
 - B. Pediatric [by on-line MD order only]
 - 20 mg/kg slow IV/IO over 60 seconds (maximum single dose 1000 mg).
- VII. Onset
 - Immediately
- VIII. Duration
 - 30 minutes - 2 hours
- IX. Precautions
 - Calcium precipitates with sodium bicarbonate forming calcium carbonate (chalk) and is incompatible with other drugs. Flush IV tubing before and after administration.
 - Causes tissue necrosis if infused into the interstitial space. Verify IV patency prior to administration.
- X. Note
 - Hyperkalemia is common in dialysis patients due to potassium retention and can occur with an overdose of potassium supplements.
 - Common names of calcium channel blocking agents: Adalat® or Procardia® (nifedipine), Calan® or Isoptin® (verapamil) and Cardizem® (diltiazem).