



REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME
calcium chloride



Effective Date: May 2013 Revised Date: Nov13-2013 Review Date: Jan 10-2018	CLASSIFICATION Electrolyte	OTHER NAMES	PAGE 1 of 2
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ADMINISTRATION POLICY:

- IV Bolus - **Restricted to nurses in ED/Cardiac Room/ICU/OR**
- IV Infusion - **Restricted to nurses in ED/Cardiac Room/ICU/OR.**
 Continuous infusion requires ECG monitoring.
- IM/Subcutaneous - *Not recommended*

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as a 100 mg/mL- 10 mL (10%) prefilled syringe. Each mL contains: calcium chloride 100 mg, which equals 0.7 mmol or 1.4 mEq elemental calcium.

- IV Bolus:** Administer undiluted at a maximum rate of 1 mL/minute (100 mg/minute) of the 10% solution. In cardiac resuscitation situations, the dose may be administered over 10 to 20 seconds. Continuous cardiac monitoring required for IV bolus administration.
- IV Intermittent:** Dilute 1 gram dose in 100 mL minibag normal saline. Administer dose over 60 minutes. If administered peripherally monitor IV site for pain, redness or swelling prior to initiating infusion and every 15 minutes until completion of infusion. **MUST BE ADMINISTERED VIA A LARGE VEIN. DO NOT** use veins in the hands or feet.
- Maximum Rate:** **IV Bolus:** 100 mg/minute or 1 gram over 10 minutes (10 to 20 seconds in cardiac arrest situation)
IV Intermittent: 1 gram/hour
- Maximum Concentration:** **IV Bolus:** 100 mg/mL (1g/10 mL)
IV Intermittent: 10 mg/mL (1g/100 mL)

DOSAGE:

Usual:
Treatment of life- threatening hyperkalemia or treatment of calcium channel blocker overdose:
 8-16 mg/kg (usually 0.5 to 1 gram or 5 to 10 mL of a 10% solution) IV; repeat as needed.

Cardiac resuscitation: 1 gram (10 mL) IV over 10 to 20 seconds.

Hypocalcemia: Calcium GLUCONATE is the drug of choice in non-emergent situations. For Emergency treatment of hypocalcaemia, use 0.5 to 1gram (5 to 10 mL) calcium CHLORIDE IV. Repeat dose as indicated by patient response and serum calcium concentrations.

Maximum single dose: 1gram (10 mL of a 10% solution)
Maximum daily dose: 3 gram (30 mL of a 10% solution)



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PAGE

2 of 2

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:

- Contraindicated in patients with hypercalcemia
- Rapid IV administration may cause bradycardia, vasodilation, hypotension, cardiac arrhythmias, syncope and cardiac arrest.
- Flushing, nausea, vomiting, drowsiness, and sweating.
- Tingling sensations, a chalky taste, a sense of oppression or heat waves.
- Extravasation risk: irritant; may cause severe skin necrosis and sloughing, especially with IM/subcutaneous.

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

- Use with caution in patients receiving digoxin, those with severe hyperphosphatemia, respiratory failure or acidosis.
- Monitor serum calcium and albumin levels especially those patients with renal failure.
- Calcium Chloride 10% contains 3 times the amount of calcium as calcium Gluconate 10%
- Elderly patients: The elderly may be more sensitive to peripheral vasodilation and decreased blood pressure associated with calcium chloride administration. Infuse at slower rates if possible.