



REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME

calcium gluconate



Effective Date: May 2013

CLASSIFICATION
Electrolyte

OTHER NAMES

PAGE

Revised Date: September 2022

1 of 2

ADMINISTRATION POLICY: *(see required monitoring in "Additional Notes")*

IV Bolus: - Administration restricted to nurses under direct supervision of prescriber

IV Infusion: - May be administered by a nurse

IV intermittent: - May be administered by a nurse

IM/Subcutaneous: - *Not recommended*

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 100 mg/mL – 10 mL vial

100 mg calcium gluconate = 9.3 mg elemental calcium = 0.23 mmol (0.47 mEq) elemental calcium

IV Bolus: Dilute with equal volume of diluent (preferred) OR undiluted and administer at 200 mg/minute

IV Intermittent: Dilute in 50 to 100 mL normal saline. Administer over 30 to 60 minutes.

IV infusion: Utilize pump and program manually (volume-time)

Calcium gluconate 100 mg/mL	Diluent Volume (normal saline)	Final concentration	Final Volume (VTBI)
50 mL (5000 mg)	500 mL	9.091 mg/mL	550 mL
100 mL (10000 mg)	1000 mL	9.091 mg/mL	1100 mL

Maximum Rate: 200 mg/minute

Maximum Concentration: IV Bolus: 100 mg/mL
IV Continuous: 50 mg/mL

DOSAGE:

Cardiac arrest: IV bolus: 1500 to 3000 mg

Hypocalcemia: IV Intermittent: 1000 to 2000 mg, may repeat dose after 10 to 60 minutes if symptoms persist
IV Infusion: 5 to 20 mg/kg/hour

Hyperkalemia: IV/IO bolus: 1000 to 2000 mg, may repeat after 5 minutes if ECG changes persist or recur, then every 30 to 60 minutes as needed

Beta-blocker or Calcium channel blocker overdose:

IV bolus: 60 mg/kg/dose over 5 to 10 minutes, may repeat every 10 to 20 minutes for 3 to 4 doses OR
IV infusion: 60 to 120 mg/kg/hour

STABILITY/COMPATIBILITY:

Stability of Final Admixture: 24 hours room temperature

Compatibility: Compatible in D5W, normal saline, dextrose-saline solutions, Lactated Ringer



REGIONAL ADULT PARENTERAL DRUG MONOGRAPH

GENERIC NAME
calcium gluconate



Effective Date: May 2013

CLASSIFICATION
Electrolyte

OTHER NAMES

PAGE

Revised Date: September 2022

2 of 2

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:

CV: bradycardia, dysrhythmias, hypotension and cardiac arrest

Local: tissue necrosis, phlebitis

Other: too rapid administration – calcium taste and tingling sensation in the extremities; flushing, nausea, vomiting

CAUTION

patients with renal impairment or the concurrent administration of digoxin.

ADDITIONAL NOTES AND NURSING CONSIDERATIONS:

REQUIRED MONITORING

Hypocalcemia - IV intermittent and IV infusion

- Heart rate and blood pressure at baseline and every 15 minutes x 2

Emergent indications – IV/IO bolus

- Continuous cardiac monitoring, continuous blood pressure (preferred) or blood pressure at baseline and every 10 minutes x 3, respiratory rate, oxygen saturation at baseline and every 10 minutes x 3

Beta-blocker or Calcium channel blocker overdose – IV intermittent

- Continuous cardiac monitoring, continuous blood pressure (preferred) or blood pressure at baseline and every 10 minutes x 3, respiratory rate, oxygen saturation at baseline and every 10 minutes x 3

RECOMMENDED MONITORING (IV intermittent and IV infusion)

- serum calcium at baseline and as clinically indicated
- blood pressure, heart rate, respiratory rate at baseline and as clinically indicated

Do not administer calcium gluconate in the same line as phosphate containing solutions (may precipitate)