

# Calcium

## Calcium Gluconate

### Indications

Calcium Gluconate is indicated for Antidote in severe hypermagnesaemia, Severe hyperkalaemia, Hypocalcaemic tetany, Severe acute hypocalcaemia, Hypocalcaemia and calcium deficiency states

### Therapeutic Class

Minerals in bone formation, Specific mineral preparations

### Pharmacology

Calcium gluconate is used to prevent or treat negative calcium balance. It also helps facilitate nerve and muscle performance as well as normal cardiac function.

### Dosage & Administration

**Intravenous:** Antidote in severe hypermagnesaemia, Severe hyperkalaemia:

**Adult:** 10 ml of 10% calcium gluconate solution over 2 minutes, repeated every 10 minutes if needed.

**Child:** Neonate and 1 mth-18 yr: 0.5 ml/kg of 10% calcium gluconate solution as a single dose. Max: 20 ml of 10% calcium gluconate solution.

**Intravenous:** Hypocalcaemic tetany, Severe acute hypocalcaemia:

**Adult:** 2.25 mmol by slow IV inj over 10 minutes, followed by 58-77 ml of 10% calcium gluconate solution in 0.5-1 L of 5% dextrose solution as continuous IV infusion.

**Child:** Neonate and 1 mth-18 yr: 0.5 ml/kg of 10% calcium gluconate solution as a single dose. Max: 20 ml of 10% calcium gluconate solution.

### Interaction

Co-administration of high calcium doses with thiazide diuretics may result in milk-alkali syndrome and hypercalcaemia. May potentiate digoxin toxicity. Decreases effects of calcium-channel blockers. Enhanced absorption with calcitriol (a vitamin D metabolite).

### Contraindications

Patients with calcium renal calculi or history of renal calculi. Conditions associated with hypercalcaemia and hypercalciuria.

### Side Effects

GI irritation; soft-tissue calcification, skin sloughing or necrosis after IM/SC inj. Hypercalcaemia characterised by anorexia, nausea, vomiting, constipation, abdominal pain, muscle weakness, mental disturbances, polydipsia, polyuria, nephrocalcinosis, renal calculi; chalky taste, hot flushes and peripheral vasodilation.

### Pregnancy & Lactation

Pregnancy Category C. Either studies in animals have revealed adverse effects on the fetus (teratogenic or embryocidal or other) and there are no controlled studies in women or studies in women and animals are not available. Drugs should be given only if the potential benefit justifies the potential risk to the fetus.

### Precautions & Warnings

Impaired renal function; cardiac disease; hypercalcaemia-associated diseases, e.g. sarcoidosis; other malignancies. Pregnancy.