

Calcium ORAL: calcium carbonate, calcium gluconate, calcium lactate**- Drug Information****Brand Names:**

Epakitin®

Pharmacology:

Phosphate binding agent

Indications:

Calcium carbonate is used as a phosphorus binding agent for treating hyperphosphatemia associated with chronic kidney disease and as a calcium supplement in animals with chronic hypocalcemia.

Also rarely used as an oral antacid.

Calcium gluconate and calcium lactate are alternatives.

Contraindications:**- General**

Contraindicated in hypercalcemia.

Interactions:**- General Interactions**

No identified General Interactions at time of publishing.

- Category Interactions

- Antifungal

Azole antifungals may have decreased efficacy.

- Fluoroquinolone

Oral absorption may be blocked by calcium cations. If used together, doses should be separated by 2 hours.

- H-2 Antagonist

Lowered stomach acid may lower phosphorous binding capacity.

- Proton pump inhibitor

Lowered stomach acid may lower phosphorous binding capacity.

- Tetracycline derivative

May decrease absorption of tetracycline.

- Thiazide diuretic

Concurrent use may increase risk of hypercalcemia.

- Drug Interactions

- Aspirin / Acetylsalicylic acid

May cause decreased salicylate efficacy.

- Calcitriol

May increase risk of hypercalcemia - increased monitoring is advised.

- Cefpodoxime

Concurrent use may result in decreased cefpodoxime effectiveness.

- Digoxin

Hypercalcemia may cause serious arrhythmias with patients on digoxin.

- Levothyroxine sodium

Oral calcium products may reduce levothyroxine absorption if given at the same time. Separate dosages by at least 2 hours if possible.

- Phenytoin sodium

May decrease absorption of phenytoin.

- Propranolol

May result in decreased propranolol availability.

- Sucralfate

Concurrent use may result in decreased sucralfate efficacy.

- Verapamil

Concurrent use may result in reversal of hypotensive effects.

Adverse Effects:**- General**

Constipation, hypercalcemia, and soft tissue calcification (usually long term high dose use) may occur.

Dosages:**- General**

Note: When using oral calcium supplements, adjust the dose to give an equivalent amount of elemental calcium as provided by the chosen calcium salt.

1 gram of calcium carbonate = 400 mg of elemental calcium.

1 gram of calcium gluconate = 90 mg of elemental calcium,

1 gram of calcium lactate = 130 mg of elemental calcium..

- Small Animal**- Dog**

To treat hyperphosphatemia using a low phosphorous diet: Calcium carbonate 90 - 150 mg/kg/day DIVIDED by mouth. Start with lower dose and adjust upward based on serum phosphorous level.

Monitor ionized calcium as well.

Give with food or just before a meal.

To treat chronic hypocalcemia: 1250 mg (toy breeds) - 10 grams (giant breeds) calcium carbonate by mouth per day. Elemental calcium equivalent = 0.5 - 1 gram of ELEMENTAL CALCIUM by mouth per day.

- Cat

To treat hyperphosphatemia using a low phosphorous diet: Calcium carbonate 90 - 150 mg/kg/day DIVIDED by mouth. Start with lower dose and adjust upward based on serum phosphorous level.

Monitor ionized calcium as well.

Give with food or just before a meal.

Special Notes:

None