

## DESCRIPTION:

TABLET

Colour : Orange

Shape : Round, Flat and Scored

Coating : Uncoated

## CONTENT:

Each Tablet Contains:

Calcium Carbonate ..... 500 mg

## PHARMACODYNAMICS:

Calcium is essential for the functional integrity of the nervous, muscular, and skeletal systems. It plays a role in normal cardiac function, renal function, respiration, blood coagulation, and cell membrane and capillary permeability.

Also, calcium helps to regulate the release and storage of neurotransmitters and hormones, the uptake and binding of amino acids, absorption of vitamin B<sub>12</sub>, and gastric secretion.

The calcium of bone is in a constant exchange with the calcium of plasma. Since the metabolic functions of calcium are essential for life, when there is a disturbance in the calcium balance because of dietary deficiency or other causes, the store of calcium in bone may be depleted to fill the body's more acute needs. Therefore, on chronic basis, normal mineralization of bone depends on adequate amounts of total body calcium.

## PHARMACOKINETICS:

Calcium carbonate is converted to calcium chloride by gastric acid. Some of the calcium is absorbed from the intestines and the unabsorbed portion is excreted in the faeces.

Calcium is absorbed mainly from the small intestine. About one-third of ingested calcium is absorbed although this can vary depending upon dietary factors and the state of the small intestine; also the absorption is increased during periods of high physiological requirement such as during pregnancy and lactation.

## INDICATIONS:

Dyna Calcium Carbonate Tablet 500mg is used as an antacid, calcium supplement in deficiency states and adjunct in the management of osteoporosis. It is also used as a phosphate binder in the treatment of hyperphosphataemia in patients with chronic renal failure.

## RECOMMENDED DOSE:

To be taken orally, with a full glass of water.

Adults:

**Hypocalcemia** : 1.25 g (2½ tablets, i.e. equivalent of 500 mg of calcium) two to four times a day after meals.

**Hyperphosphatemia** : 5-13 g (10-26 tablets. i.e equivalent of 2 to 5.2 g of calcium) per day in divided doses with meals.

**Antacid** : 500 mg (1 tablet) three to four times a day after meals.

## ROUTE OF ADMINISTRATION:

FOR ORAL USE ONLY

## CONTRAINDICATIONS:

It is contraindicated in patients with hypercalcaemia, hypercalciuria, severe renal failure.

## WARNING AND PRECAUTIONS:

Calcium carbonate should be given cautiously to patients with renal impairment, or disease associated with hypercalcaemia such as sarcoidosis and some malignancies. In addition, it should generally be avoided in patients with calcium renal calculi.

Calcium chloride, because of its acidifying nature, is unsuitable for the treatment of hypocalcaemia caused by renal insufficiency or in patients with respiratory acidosis or failure.

Plasma-calcium concentrations should be monitored closely in patients with renal impairment and during parenteral dosage and if large doses of vitamin D are used concurrently.

**DRUG INTERACTIONS:**

Antacids, including calcium salts, interact with many other drugs both by alterations in gastric pH and emptying, and by formation of complexes that are not absorbed.

Hypercalcaemia has occurred when calcium salts are given with thiazide diuretics or vitamin D. Vitamin D increases the gastrointestinal absorption of calcium and thiazide diuretics decrease its urinary excretion. Plasma-calcium concentrations should be monitored in patients receiving the drugs together.

Bran decreases the gastrointestinal absorption of calcium, and may therefore decrease the efficacy of calcium supplements. Corticosteroids also reduce calcium absorption.

Calcium enhances the effects of digitalis glycosides on the heart and may precipitate digitalis intoxication; parenteral calcium therapy is best avoided in patients receiving cardiac glycosides.

Calcium salts reduce the absorption of a number of other drugs such as bisphosphonates, fluoride, some fluoroquinolones, and tetracyclines; doses should be separated by at least 3 hours.

**PREGNANCY AND LACTATION:**

Calcium carbonate should be given only if the potential benefit justifies the potential risk to the foetus.

**SIDE EFFECT/ADVERSE REACTIONS:**

Calcium carbonate may occasionally cause constipation. Flatulence from released carbon dioxide may occur in some patients. High doses or prolonged use may lead to gastric hypersecretion and acid rebound. Calcium carbonate can cause hypercalcaemia, particularly in patient with renal impairment or after high doses. Alkalosis may also occur as a result of the carbonate anion. There have been rare reports of the milk-alkali syndrome and tissue calcification.

**SYMPTOMS AND TREATMENT OF OVERDOSE:**

Calcium carbonate like other calcium salts when excessive amounts may lead to hypercalcaemia. This complication is usually associated with parental use, but can occur after oral dosage, usually in patients with renal failure or who are also taking vitamin D.

Symptoms of hypercalcaemia include anorexia, nausea, vomiting, constipation, abdominal pain, muscle weakness, mental disturbances, polydipsia, polyuria, nephrocalcinosis, renal calculi, and in severe cases, cardiac arrhythmias and coma.

Mild asymptomatic hypercalcaemia will usually resolve if calcium and other contributory drugs such as vitamin D are stopped.

If hypercalcaemia is severe, urgent treatment is required.

**PACKING/PACK SIZE(S):**

Blister pack of 100x10's.

**JAUHI UBAT DARIPADA KANAK-KANAK**

**KEEP OUT OF REACH OF CHILDREN**

Do Not Store Above 30°C

Protect From Light

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**MANUFACTURER/PRODUCT REGISTRATION HOLDER:**

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