

ANTACIDS (Oral-Local)

Introduction

VA CLASSIFICATION (Primary)

Alumina, Calcium Carbonate, and Sodium Bicarbonate%GA199
Alumina and Magnesia%GA103
Alumina, Magnesia, Calcium Carbonate, and Simethicone%GA199
Alumina, Magnesia, and Magnesium Carbonate%GA103
Alumina, Magnesia, Magnesium Carbonate, and Simethicone%GA199
Alumina, Magnesia, and Simethicone%GA199
Alumina, Magnesium Alginate, and Magnesium Carbonate%GA103
Alumina and Magnesium Carbonate%GA103
Alumina, Magnesium Carbonate, and Simethicone%GA199
Alumina, Magnesium Carbonate, and Sodium Bicarbonate%GA104
Alumina and Magnesium Trisilicate%GA103
Alumina, Magnesium Trisilicate, and Sodium Bicarbonate%GA104
Alumina and Simethicone%GA199
Alumina and Sodium Bicarbonate%GA199
Aluminum Carbonate, Basic%GA101/GU900
Aluminum Carbonate, Basic, and Simethicone%GA199
Aluminum Hydroxide%GA101/; GU900
Calcium Carbonate%GA105/
Calcium Carbonate and Magnesia%GA106
Calcium Carbonate, Magnesia, and Simethicone%GA199
Calcium Carbonate and Simethicone%GA199
Calcium and Magnesium Carbonates%GA106
Magaldrate%GA107
Magaldrate and Simethicone%GA199
Magnesium Carbonate and Sodium Bicarbonate%GA109
Magnesium Hydroxide%GA108/; GU900
Magnesium Oxide%GA108/

Accepted

Hyperacidity (treatment)

Ulcer, duodenal (treatment) or

Ulcer, gastric (treatment)%Antacids are indicated for relief of symptoms associated with hyperacidity (heartburn, acid indigestion, and sour stomach). In addition, antacids are used in hyperacidity associated with gastric and duodenal ulcers. However, there have been reports of increased gastrin levels and increased gastric secretion (acid rebound) associated with the use of antacids. 15, 31, 87

Some of the antacid combinations contain other ingredients that have no antacid properties. Simethicone, an antiflatulent, has been added as an aid in those conditions in which the retention of gas

may be a problem; however, in the treatment of peptic ulcer diseases, the advantage of using antacid and simethicone combinations rather than antacids alone has not been clearly established. 31

Hypersecretory conditions, gastric (treatment adjunct)

Zollinger-Ellison syndrome (treatment adjunct)

Mastocytosis, systemic (treatment adjunct) or

Adenoma, multiple endocrine (treatment adjunct) Antacids are indicated in conjunction with histamine H₂-receptor antagonists or omeprazole for transient symptomatic relief in the treatment of pathological gastric hypersecretion associated with Zollinger-Ellison syndrome (alone or as part of multiple endocrine neoplasia Type-I), systemic mastocytosis, and multiple endocrine adenoma. 35

Reflux, gastroesophageal (treatment) Antacids are indicated in the symptomatic treatment of gastroesophageal reflux disease. 5, 28, 31, 87

Stress-related mucosal damage (prophylaxis and treatment) Antacids are indicated to prevent and treat upper gastrointestinal, stress-induced ulceration and bleeding, especially in intensive care patients. 69, 82, 98, 99, 100

[Hyperphosphatemia (treatment)] * Aluminum carbonate and aluminum hydroxide may be used in conjunction with a low-phosphate diet to reduce elevated phosphate levels and demineralization of bones in patients with renal insufficiency. 31 However, use of aluminum-containing antacids as phosphate binders may lead to aluminum toxicity in patients with renal insufficiency. 77, 89, 90 Other agents may be preferable for treating hyperphosphatemia in patients with renal insufficiency.

Hypocalcemia (treatment) See Calcium Carbonate, Calcium Supplements (Systemic). 23

[Aluminum hydroxide has been used in the treatment of neonatal hypocalcemia and diarrhea; however, it generally has been replaced by other agents. Aluminum carbonate and aluminum hydroxide have been used along with a low-phosphate diet to prevent formation of phosphatic (struvite) urinary stones; however, their use has been replaced by other agents. 104 Magnesium hydroxide has been used to prevent recurrence of calcium stones; however, it has been replaced by other agents. 104 Use of aluminum-containing antacids in young children and premature infants may lead to aluminum toxicity, especially in those patients with renal failure. 46, 76, 77] *

Precautions to Consider

Pregnancy/Reproduction

Pregnancy Antacids are generally considered safe as long as chronic high doses are avoided. 40

Aluminum-, calcium-, or magnesium-containing antacids Adequate and well-controlled studies in humans have not been done; however, there have been reports of antacids causing such adverse effects as hypercalcemia, hypomagnesemia, hypermagnesemia, and increased tendon reflexes in fetuses and/or neonates whose mothers were chronic users of aluminum-, calcium-, and/or magnesium-containing antacids, especially in high doses.

Studies have not been done in animals.

Sodium bicarbonate-containing antacids³⁴ Problems in humans have not been documented; however, risk-benefit must be considered because sodium bicarbonate is absorbed systemically. Chronic use may lead to systemic alkalosis.⁹³ The sodium load that is absorbed can also cause edema and weight gain.

Breast-feeding

Problems in humans have not been documented; although some aluminum, calcium, and magnesium may be distributed into breast milk, the concentration is not great enough to produce an effect in the neonate.⁴¹

Pediatrics

Antacids should not be given to young children (up to 6 years of age) unless prescribed by a physician. Since children are not usually able to describe their symptoms precisely, proper diagnosis should precede the use of an antacid. This will avoid the complication of an existing condition (e.g., appendicitis) or the appearance of severe adverse effects.

Use of magnesium-containing antacids is contraindicated in very young children¹⁰² because there is a risk of hypermagnesemia⁹⁴, especially in dehydrated children or children with renal failure.⁶⁸

Use of aluminum-containing antacids is contraindicated in very young children¹⁰² because there is a risk of aluminum toxicity, especially in dehydrated infants and children or infants and children with renal failure.^{76, 77}

Geriatrics

Metabolic bone disease commonly seen in the elderly may be aggravated by the phosphorus depletion³⁰, hypercalciuria, and inhibition of absorption of intestinal fluoride caused by the chronic use of aluminum-containing antacids.⁷⁹ Also, elderly patients are more likely to have age-related renal function impairment, which may lead to aluminum retention.^{67, 102}

Although it is not known whether high intake of aluminum leads to Alzheimer's disease, the use of aluminum-containing antacids in Alzheimer's patients is not generally recommended. Research suggests that aluminum may contribute to the disease's development since it has been found to concentrate in neurofibrillary tangles in brain tissue.^{46, 80, 83}

Drug interactions and/or related problems

The following drug interactions and/or related problems have been selected on the basis of their potential clinical significance (possible mechanism in parentheses where appropriate)³⁴not necessarily inclusive (>> = major clinical significance):

Medical considerations/Contraindications

The medical considerations/contraindications included have been selected on the basis of their potential clinical significance (reasons given in parentheses where appropriate)¼ not necessarily inclusive (>> = major clinical significance).