

Heartburn Management

Non-Prescription Drugs and Parapharmaceuticals

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Definition

- Heartburn is a painful, burning feeling in your chest, that rises up from the stomach towards your neck.
- It can happen at any time but is more common after eating.
- Patients will often describe the symptoms of heartburn – typically a **burning discomfort/pain** felt in the **stomach, passing upwards behind the breastbone (retrosternal)**.



Mechanism of heartburn



What causes heartburn?

Drugs (e.g., theophylline, morphine, calcium channel blockers, diazepam) can decrease lower esophageal sphincter (LES) pressure, leading to increased reflux.

Foods such as citrus, tomato-based foods, and spicy foods can irritate inflamed esophageal mucosa.

Smoking contributes by relaxing LES and decreasing salivation.

Anxiety, fear, and worry may lower visceral sensitivity thresholds, leading to increased pain perception.

Bending over, straining to defecate, lifting heavy objects, and performing isometric exercises may increase intraabdominal pressure above the LES pressure, leading to reflux.

Obesity increases intraabdominal pressure

TABLE 14-1 Risk Factors That May Contribute to Heartburn

Dietary

Fatty foods
Spicy foods
Chocolate
Salt and salt substitutes
Garlic or onions
Mint (e.g., spearmint, peppermint)
Alcohol (ethanol)
Caffeinated beverages
Carbonated beverages
Citrus fruit or juices
Tomatoes/tomato juice

Lifestyle

Exercise
Smoking (tobacco)
Obesity
Stress
Supine body position
Tight-fitting clothing

Diseases

Motility disorders
(e.g., gastroparesis)
Scleroderma
PUD
Zollinger-Ellison syndrome

Medications

Bisphosphonates
Aspirin/NSAIDs
Iron
Potassium
Quinidine
Tetracycline
Zidovudine
Anticholinergic agents
Alpha-adrenergic antagonists
Barbiturates
Beta₂-adrenergic agonists
Calcium channel blockers
Benzodiazepines
Dopamine
Estrogen
Narcotic analgesics
Nitrates
Progesterone
Prostaglandins
Theophylline
TCAs
Chemotherapy

Other

Genetics
Pregnancy

Heartburn: Who's at Risk?



- Heartburn is often brought on by **bending or lying down**.
- It is more likely to occur in those who are **overweight** and can be aggravated by a **recent increase in weight**.
- It is also more likely to occur **after a large meal**.
- **Alcohol** and **smoking** are known to cause or aggravate heartburn.
- wear tight-fitting clothes
- **Stress** is also a factor in the condition.

Heartburn causes

- Heartburn is most frequently noted within 1 hour after eating, especially after a large meal or ingestion of offending foods and/or beverages.

Gastroesophageal Reflux (GERD) - stomach fluids containing acid and digestive enzymes back up past the valve like sphincter that separates the stomach from the esophagus, causing pain.

- Gastrointestinal diseases:

Chronic gastritis, stomach ulcer disease, chronic cholecystitis, hiatal hernias.

Acid-related disorders

TABLE 14-2 Differentiation of Simple Heartburn from Other Acid-Related Disorders

	Simple Heartburn	GERD	Dyspepsia	PUD
Typical symptoms	Burning sensation behind the breastbone that may move upward toward the neck or throat	Heartburn, acid regurgitation (acid taste in the mouth), hypersalivation	Primary: epigastric discomfort Other: belching or burping, bloating, nausea, early satiety; may be accompanied by heartburn and acid regurgitation.	Gnawing or burning epigastric pain, occurring during day and frequently at night; may be accompanied by heartburn and dyspepsia.

- **Heartburn occurring two or more times a week is suggestive of GERD.**

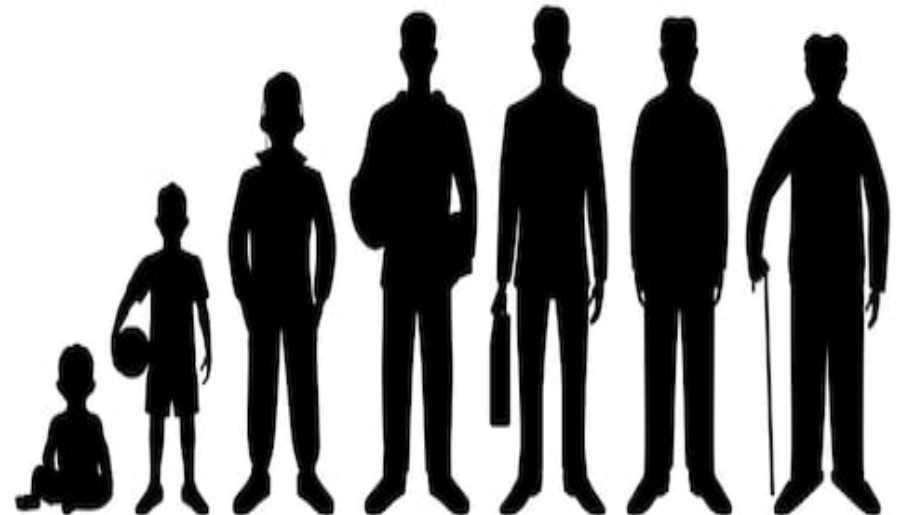
Heartburn

What you need to know/ 1. Age

The symptoms of reflux and esophagitis occur more commonly in patients aged over 55 years.

Heartburn is not a condition normally experienced in childhood, although symptoms can occur **in young adults** and particularly in pregnant women.

Children with symptoms of heartburn should therefore be referred to their doctor.

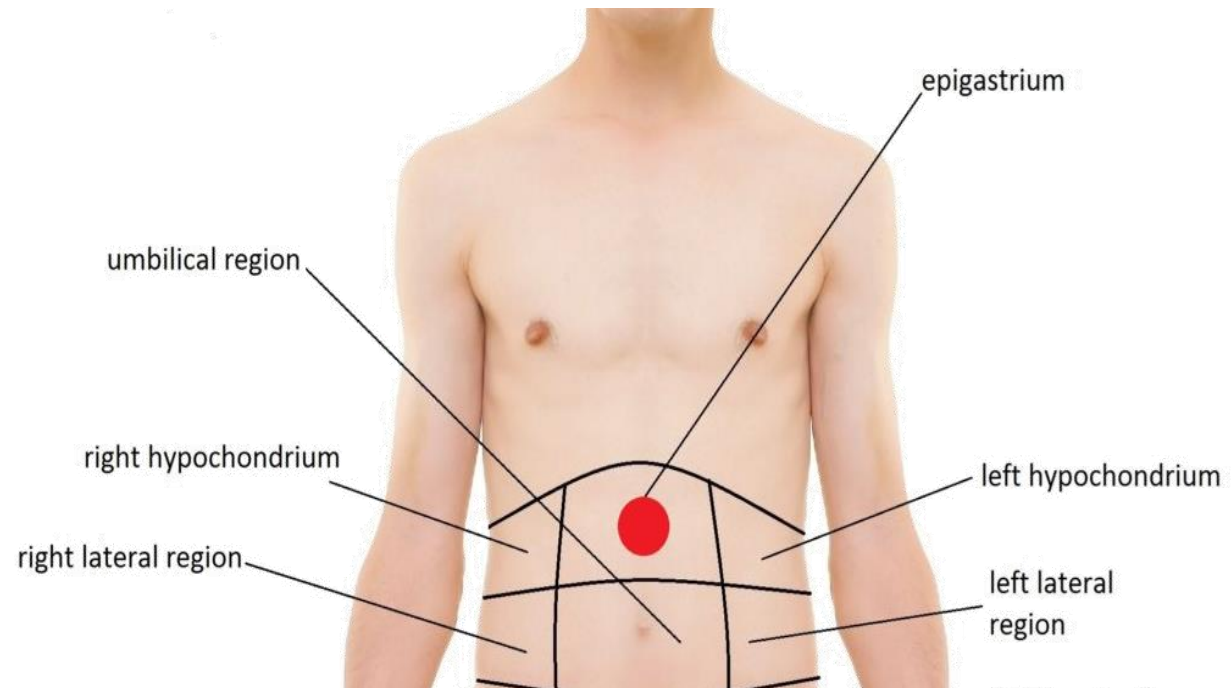


Heartburn

What you need to know/ 2. Symptoms

A burning discomfort is experienced in the **upper part of the stomach in the midline (epigastrium)**, and the burning feeling **tends to move upwards behind the breastbone (retrosternal)**.

The pain may be felt only in the **lower retrosternal area** or on occasion **right up to the throat**, sometimes associated with **an acid taste in the mouth**.



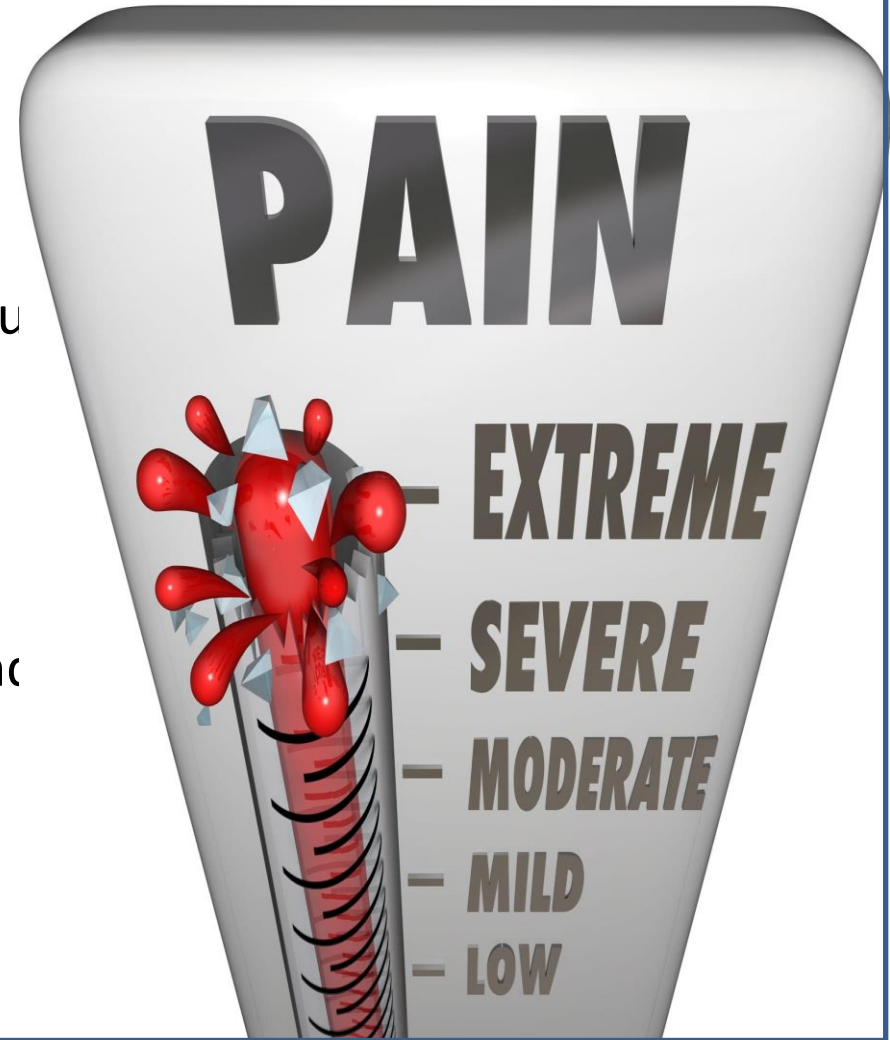
Heartburn

What you need to know/ 2. Symptoms- Severe Pain

Sometimes the pain can come on **suddenly** and **severely** and even **radiate to the back and arms**.

In this situation differentiation of symptoms is difficult as the pain can mimic a heart attack and urgent medical referral is essential.

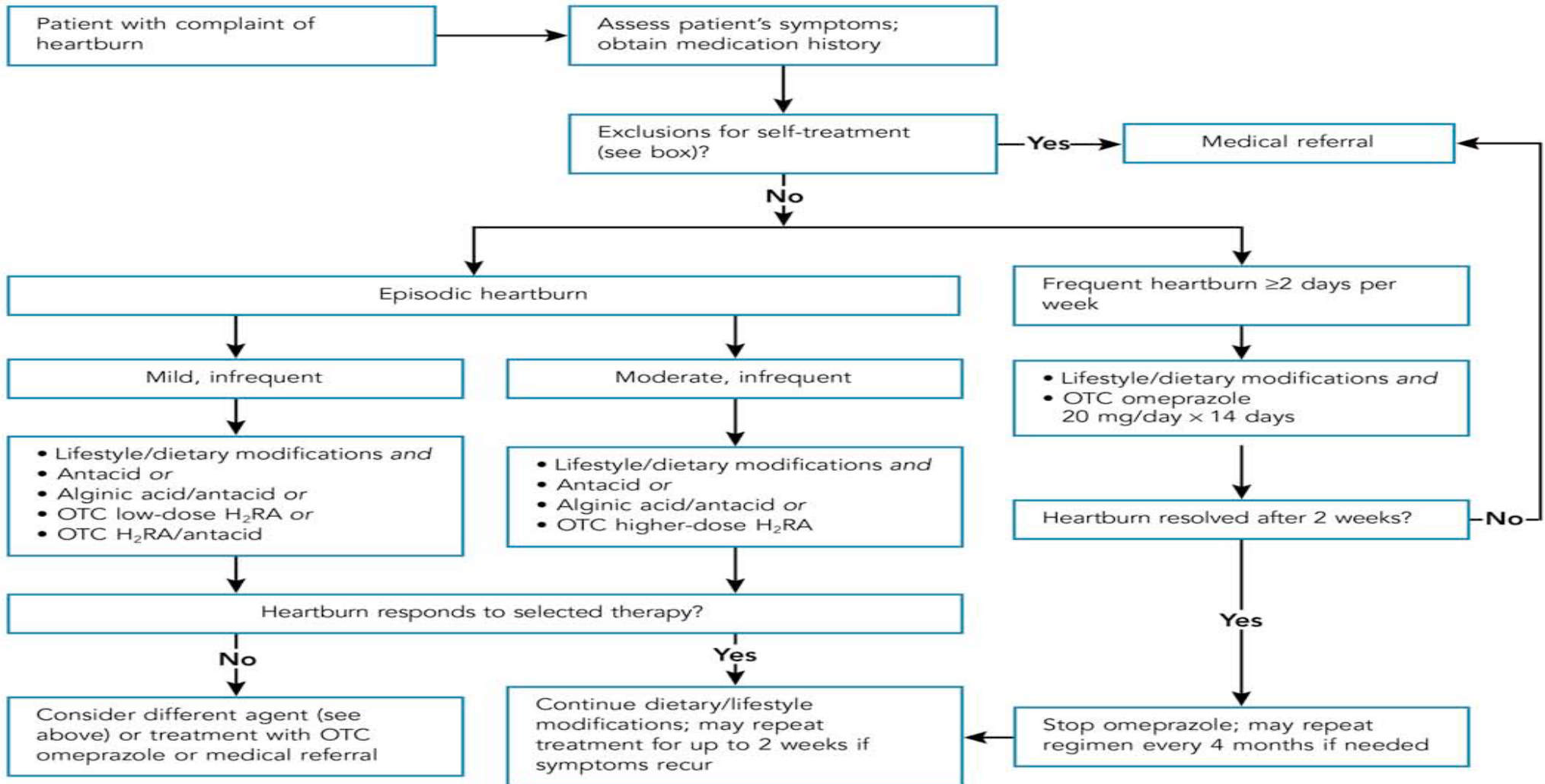
Sometimes patients who have been admitted to hospital apparently suffering a heart attack are found to have esophagitis instead.



The goals of self treatment

1. To render the patient symptom-free.
2. Prevent meal- or exercise- related symptoms.
3. Improve quality of life.
4. Prevent complications using most cost- effective therapy.

Self care of heartburn



Treatment timescale

If symptoms have not responded to treatment after 1 week, the patient should see a doctor

Exclusions for Self-Treatment

- Frequent heartburn for more than 3 months
- Heartburn while taking recommended dosages of nonprescription H₂RA or PPI
- Heartburn that continues after 2 weeks of treatment with a nonprescription H₂RA or PPI
- Heartburn and dyspepsia that occur when taking a prescription H₂RA or PPI
- Severe heartburn and dyspepsia
- Nocturnal heartburn
- Difficulty or pain on swallowing solid foods
- Vomiting up blood or black material or black tarry stools
- Chronic hoarseness, wheezing, coughing, or choking
- Unexplained weight loss
- Continuous nausea, vomiting, or diarrhea
- Chest pain accompanied by sweating, pain radiating to shoulder, arm, neck, or jaw, and shortness of breath
- Pregnancy
- Nursing mothers
- Children younger than 12 years (for antacids, H₂RAs) or younger than 18 years (for omeprazole)

Heartburn

What you need to know/ 6. Management

Small meals, eaten frequently, are better than large meals, as reducing the amount of food in the stomach reduces gastric distension, which helps to prevent reflux.

Gastric emptying is slowed when there is a large volume of food in the stomach; this can also aggravate symptoms.

High-fat meals delay gastric emptying.

The evening meal is best taken several hours before going to bed.



Heartburn

What you need to know/ 6. Management

Certain postures can provoke symptoms.

It is better to squat rather than bend down.

Since the symptoms are often worse when the patient lies down, there is evidence that raising the head of the bed can reduce both acid clearance and the number of reflux episodes. Using extra pillows is often recommended.



Heartburn During Pregnancy

- More than half of all pregnant women report symptoms of severe heartburn, especially during their second and third trimesters.
- Mild symptoms should be treated with lifestyle changes, including eating several small meals a day instead of three large ones, avoiding fried and spicy foods, and not lying down after eating.
- If diet and lifestyle don't alleviate symptoms, pregnant women should consult their doctor before taking any medications

Heartburn

What you need to know/ 6. Management

a. Antacids

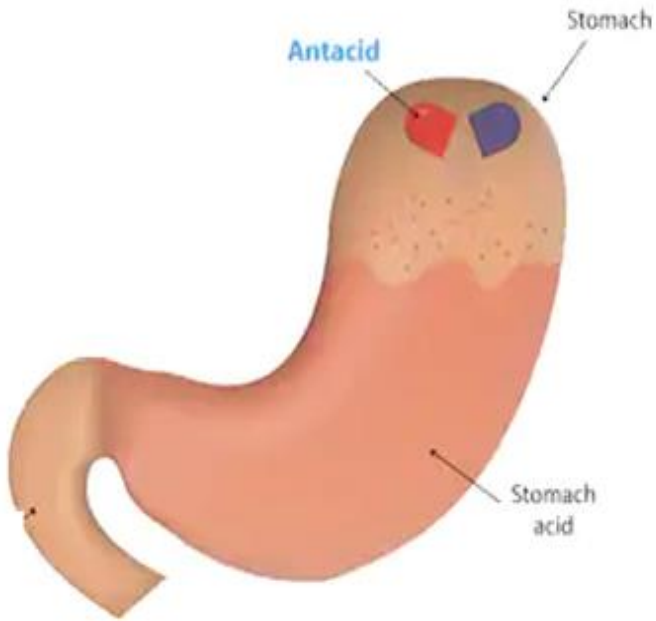
b. Alginates

c. H₂
antagonists

d. Proton
pump
inhibitors

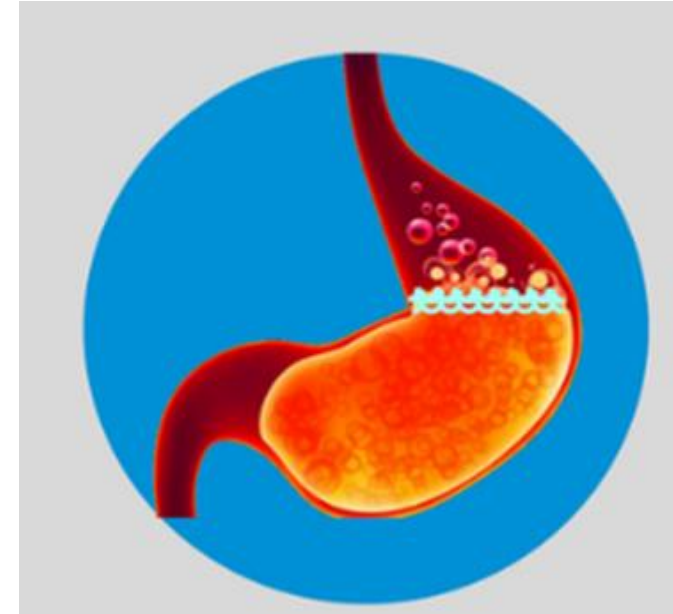
Heartburn

a. Antacids



A group of medicines which help to neutralize the acid content of your stomach

b. Alginates



An alginate is derived from seaweed.

Alginate-based products provide a **physical barrier** and work by forming a neutral floating gel or raft (a protective barrier) on top of the stomach to prevent stomach contents, including pepsin, from backing up into the esophagus and airways.

Pharmacologic therapy

TABLE 14-3 Effectiveness of Nonprescription Medications in Relieving Heartburn

Medication	Onset of Relief	Duration of Relief	Symptomatic Relief
Antacids	<5 minutes	20–30 minutes ^a	Excellent
H ₂ RAs	30–45 minutes	4–10 hours	Excellent
H ₂ RA + antacid	<5 minutes	8–10 hours	Excellent
PPIs	2–3 hours	12–24 hours	Superior

Key: H₂RA, histamine₂-receptor antagonist; PPI, proton pump inhibitor.

^a Food prolongs duration of relief.

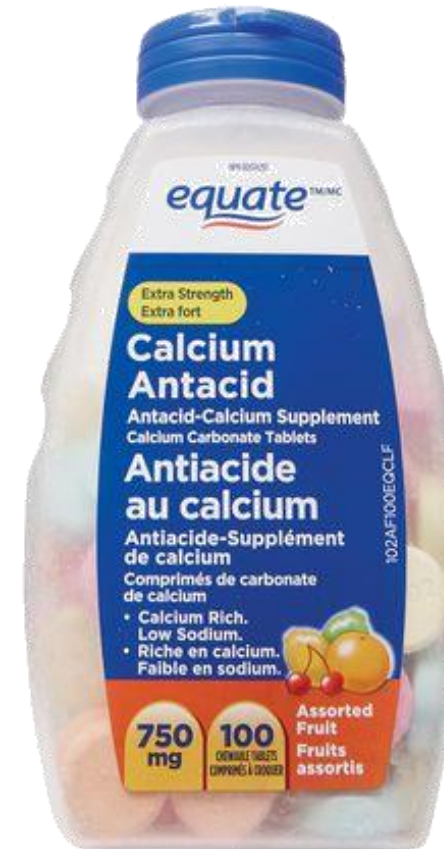
Antacids

- Antacids (sodium bicarbonate, calcium carbonate, magnesium hydroxide, and aluminum hydroxide) are available alone and in combination with each other and other ingredients.
- Antacids work by neutralizing acid in the stomach.
- Antacids may be used for relief of mild, infrequent heartburn or dyspepsia (indigestion).
- Antacids are usually taken at the onset of symptoms. Relief of symptoms begins within 5 minutes.
- Because antacids come in a variety of strengths and concentrations, it is essential to consult the label of an individual product for correct dosing quantities and frequencies. Generally antacids should not be used more than four times a day, or regularly for more than 2 weeks.
- If symptoms are not relieved with recommended dosages, consult a health care provider.
- Diarrhea may occur with magnesium- or magnesium/aluminum-containing antacids; constipation may occur with aluminum- or

calcium-containing antacids. Consult with a health care provider if these effects are severe or do not resolve in a few days.



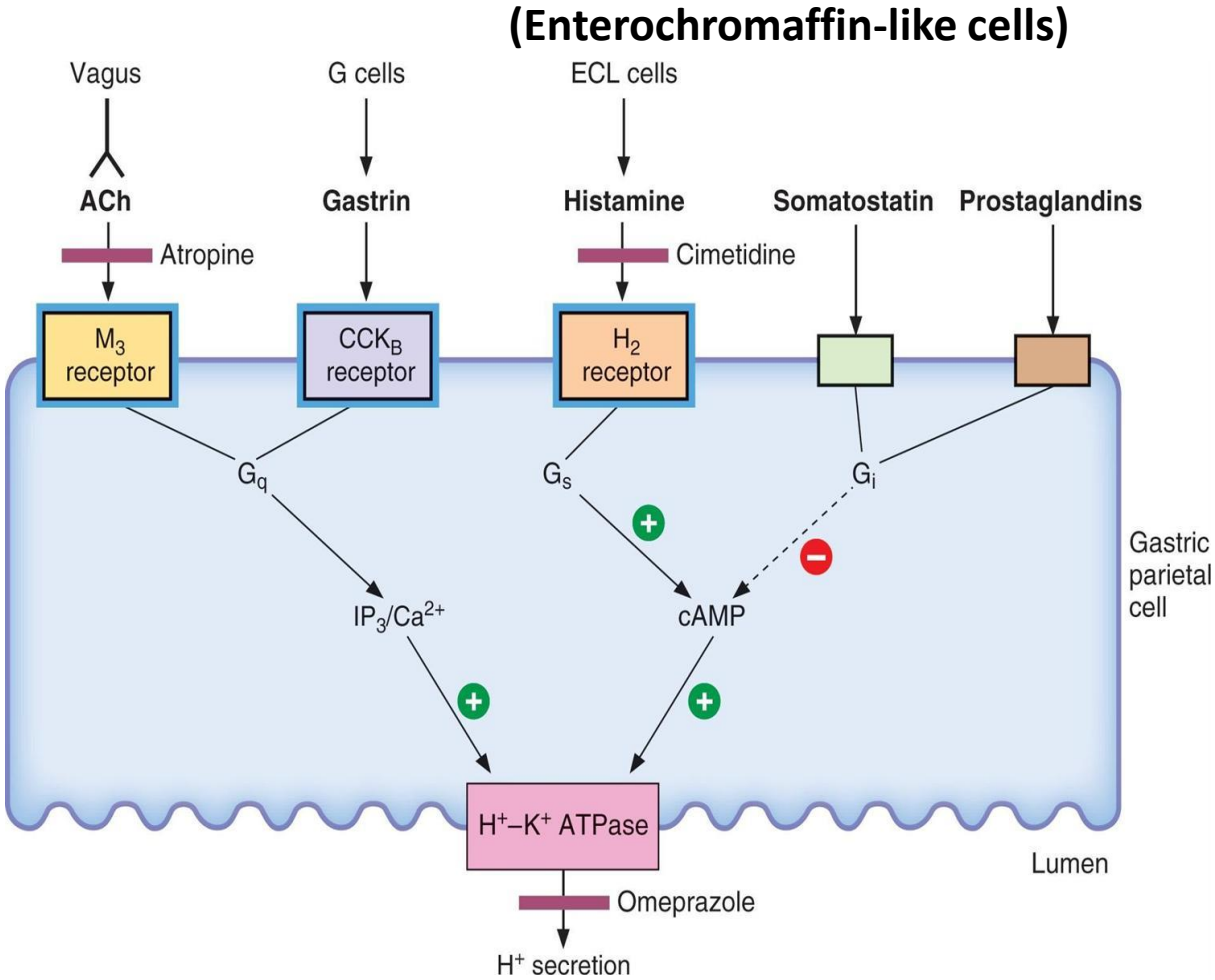
- Patients with renal impairment should consult with their primary care provider prior to self-treatment with antacids.
- Patients taking tetracyclines, fluoroquinolones, azithromycin, digoxin, ketoconazole, itraconazole, and iron supplements should not take antacids within 2 hours of taking any of these medications.



Acid Reducers

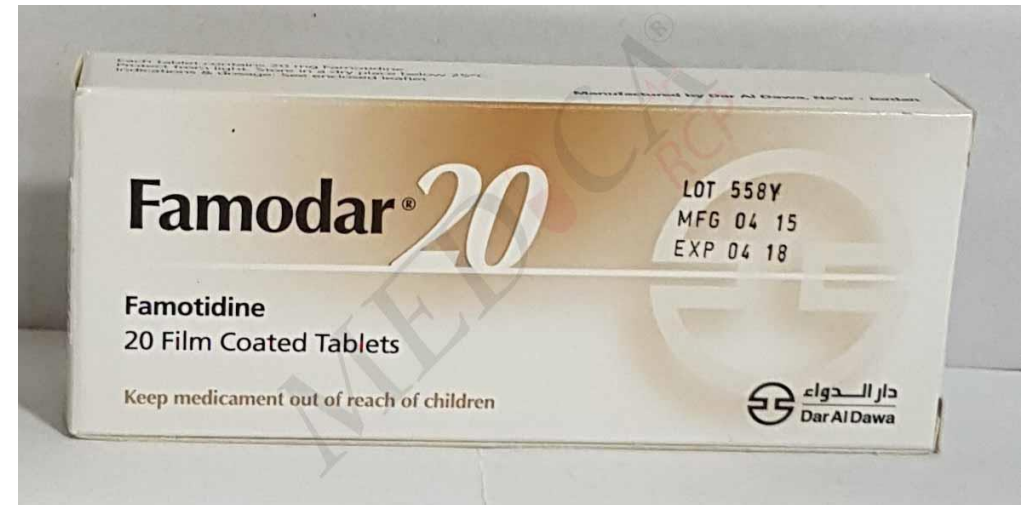
H2 antagonists

Proton pump inhibitors



Histamine₂-Receptor Antagonists

- H₂RAs (cimetidine, famotidine, nizatidine, and ranitidine) may be used to prevent heartburn and indigestion associated with meals.
- H₂RAs are usually taken at the onset of symptoms or 1 hour before symptoms are expected. Relief of symptoms can be expected to begin within 30–45 minutes. A combination product that contains both an antacid and an H₂RA provides more rapid relief of symptoms.
- H₂RAs generally relieve symptoms for 4–10 hours. H₂RAs can be taken when needed up to twice daily for 2 weeks
- H₂RAs work by decreasing acid production in the stomach.
- H₂RAs should be used for relief of mild-to-moderate, infrequent, and episodic heartburn and indigestion when a longer effect is needed; use lower dosages for mild infrequent heartburn and higher dosages for moderate infrequent symptoms.
- If symptoms are not relieved with recommended doses or persist after 2 weeks of treatment, consult a primary care provider.
- Side effects are uncommon. Consult a primary care provider if side effects are severe or do not resolve within a few days.
- Cimetidine may interact with certain prescription medications. Consult your primary care provider if you are taking a blood thinner such as warfarin, an antifungal such as ketoconazole, antidepressants, anticonvulsants, theophylline, or amiodarone.



Proton Pump Inhibitors

- Proton pump inhibitors (omeprazole) work by decreasing acid production in the stomach.
 - Omeprazole is indicated for mild-to-moderate frequent heartburn that occurs 2 or more days a week. It is not intended for the relief of mild, occasional heartburn.
 - Omeprazole should be taken with a glass of water every morning 30 minutes before breakfast for 14 days. Make sure that you take the full 14-day course of treatment.
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- Do not take more than 1 tablet a day.
 - Complete resolution of symptoms should be noted within 4 days of initiating treatment.
 - If symptoms persist, are not adequately relieved after 2 weeks of treatment, or recur before 4 months has elapsed since treatment, consult your primary care provider.
 - Do not crush or chew tablet, or crush tablet in food or beverage; this may decrease omeprazole's effectiveness.
 - Side effects are uncommon. Consult with a health care provider if side effects are severe or do not resolve with a few days.
 - Ask a health care provider if you are also taking blood thinners such as warfarin, antifungals such as ketoconazole, or anti-anxiety medications such as diazepam or digoxin.

