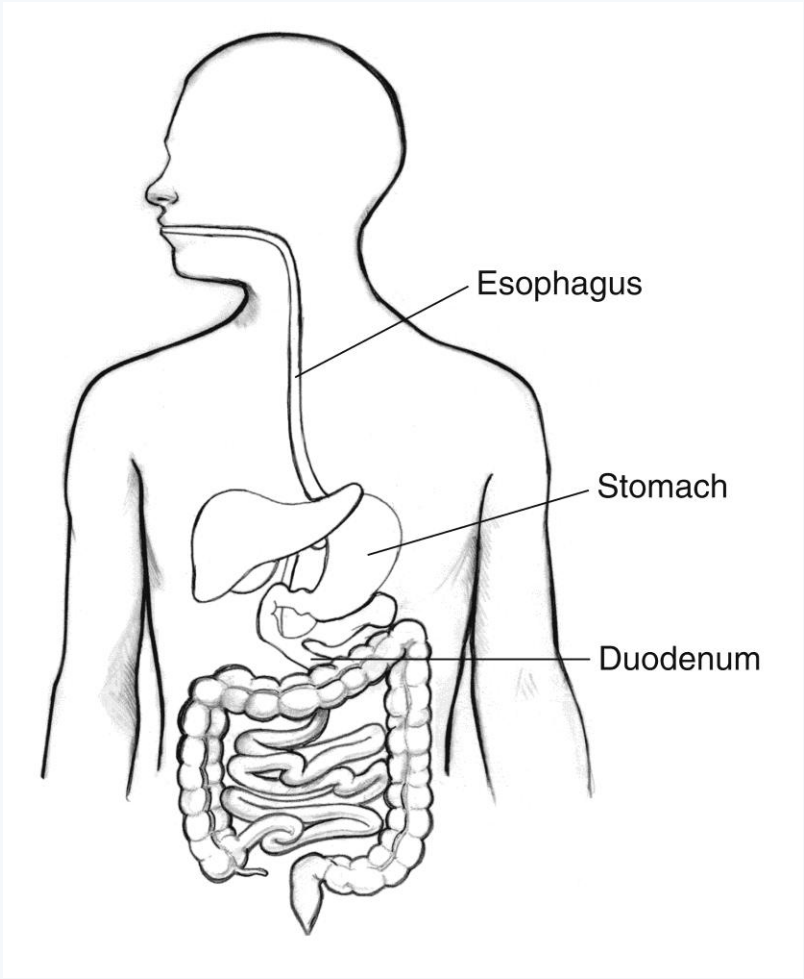
Heartburn

Patient assessment and management



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Background

Heartburn is a burning retrosternal symptom caused by reflux of gastric contents. Recurrent troublesome reflux may indicate GERD (1, 2).

Gastric acid irritates the esophageal mucosa and may cause esophagitis (1).

Patient assessment with heartburn

A. Typical symptoms

Epigastric or lower-chest burning that rises behind the sternum, sometimes reaching the throat with an acid taste (1, 2).

B. Aggravating factors

Large meals, bending or lying down, excess weight, pregnancy, stress and tight clothing (1, 2).

Assessment and referral

Assess duration, severity, swallowing, medication use and previous treatment response (1–3).
Urgent assessment: sudden severe chest pain, especially if radiating to the arm or back, or food sticking on swallowing (1).

Refer: dysphagia, painful swallowing, persistent regurgitation, worsening symptoms, nocturnal pain or suspected drug-related symptoms (1–3).
Children and persistent new-onset symptoms need clinical assessment.
Referral depends on age, alarm features and local guidance.
Review if symptoms persist after 2 weeks of self-treatment or treatment fails (1).

Medicines that may worsen reflux

Reduced sphincter tone: calcium channel blockers (e.g., amlodipine), amitriptyline, theophylline, nitrates and PDE5 inhibitors (sildenafil, tadalafil) (1, 3).

Iron may cause upper-GI discomfort. NSAIDs may worsen esophageal irritation (1, 3).

Bisphosphonates (e.g., alendronate) may cause esophagitis. Take with water and remain upright as directed (1).

Review suspected medicines with the prescriber.

Non-pharmacological management

Eat smaller meals, avoid tight clothing and lose weight if overweight (1, 2).

Identify personal food and drink triggers. Reduce smoking, alcohol, caffeine or chocolate if they worsen symptoms (1, 2).

For nocturnal symptoms, avoid lying down for 2–3 hours after meals (2).

Raise the head of the bed by 6–8 inches or use a wedge. Extra ordinary pillows may increase bending at the waist (2).

Antacids: use and dosage form

Examples: aluminum salts, magnesium salts, calcium carbonate and sodium bicarbonate (1–4).

Rapid, short-term relief. Take as needed, preferably after meals (1, 3).

Liquids act faster. Tablets are convenient and should be chewed or used as directed (1, 4).

Interactions

Antacids can alter drug absorption through chelation, adsorption and changes in gastric pH (3, 4).

Separate other medicines by 2–4 hours, unless the specific product or interacting drug requires a different interval [NHS].

They may disrupt enteric coatings and release medicines prematurely in the stomach (4).

Antacids: adverse effects and cautions

Aluminum salts may cause constipation. Magnesium salts may cause diarrhea. Combination products reduce these bowel effects (1).

Avoid sodium bicarbonate when sodium restriction is required and during pregnancy (1, 3, 5).

Calcium carbonate is potent and rapid acting. Excessive prolonged use may cause hypercalcemia and acid rebound (1).

Alginates (Gaviscon®)

Form a floating raft over gastric contents to reduce reflux (1).

Take after main meals and at bedtime, or as needed according to the product label (3).

Suitable products can be used in pregnancy and breastfeeding (3).

Check sodium content in patients on sodium restriction. Some formulations use potassium bicarbonate instead (1).

H2 receptor antagonists (H2RAs)

Examples: famotidine, cimetidine and nizatidine. OTC availability and age limits depend on the country and product (2, 6).

Ranitidine: FDA withdrew older products in 2020 because of NDMA concerns. Reformulated tablets received US approval in November 2025 [FDA].

Use only locally authorized products and follow the current label.

Histamine 2 receptor antagonists (H2RA)

Dosage (maximum daily dose)	Primary Ingredient(s)
1 tablet with a glass of water (2 tablets) (2)	Cimetidine 200 mg (2)
1 tablet with a glass of water (2 tablets) (2)	Famotidine 20 mg (2)
Chew and swallow 1 tablet (2 tablets) (2)	Famotidine 10 mg; calcium carbonate 800 mg; magnesium hydroxide 165 mg (2)
1 tablet (2 tablets) (6)	Nizatidine 75 mg (6)

Follow the product label. Maximum: 2 doses per 24 hours (2, 6).

H2RAs: practical points and adverse effects

Slower onset than antacids, but longer-lasting relief (2).

Use at symptom onset or 30–60 minutes before a trigger meal.

Daily use can produce tolerance (2).

Famotidine with calcium carbonate and magnesium hydroxide combines rapid and sustained relief (2).

Refer if regular self-treatment is needed beyond 2 weeks (2).

Adverse effects: headache, diarrhea or constipation, dizziness and drowsiness (2).

High-dose cimetidine may cause gynecomastia, reduced libido or impotence (2).

Proton pump inhibitors (PPIs)

OTC options include omeprazole, esomeprazole, lansoprazole and pantoprazole, depending on local authorization (1, 2).

For adults with frequent heartburn, typically symptoms on 2 or more days per week (2).

Product strengths and instructions vary by country and formulation (1, 2).

Proton pump inhibitors (PPIs)

United Kingdom	Omeprazole (10 mg tablet), esomeprazole (20 mg tablet) and Pantoprazole (20 mg tablet) (1).
United States	Omeprazole (20 mg tablet), Lansoprazole (15 mg capsule) and esomeprazole (20 mg capsule) (2).

Immediate-release omeprazole (Zegerid®): omeprazole 20 mg plus sodium bicarbonate 1100 mg. Check sodium-related cautions (2).

Proton pump inhibitors (PPIs)

Take delayed-release PPIs 30–60 minutes before a meal, preferably breakfast (2).

Swallow whole. Do not crush or chew delayed-release tablets or granules (1).

Acid suppression lasts about 24 hours. Full relief may take 1–4 days. An antacid may provide interim relief (1, 2).

Follow the labeled OTC course, usually up to 14 days. Seek advice if symptoms persist or recur frequently (1, 2).

PPIs: precautions and interactions

Pregnancy or breastfeeding: seek professional advice before self-treatment. This is not a blanket contraindication to prescribed PPI use [NHS].

Common adverse effects: headache, nausea, diarrhea and sometimes constipation (1).

Avoid omeprazole or esomeprazole with clopidogrel because they inhibit CYP2C19 and reduce activation of clopidogrel [SPS].

If a PPI is required with clopidogrel, consider pantoprazole, lansoprazole or rabeprazole under professional guidance [SPS].

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