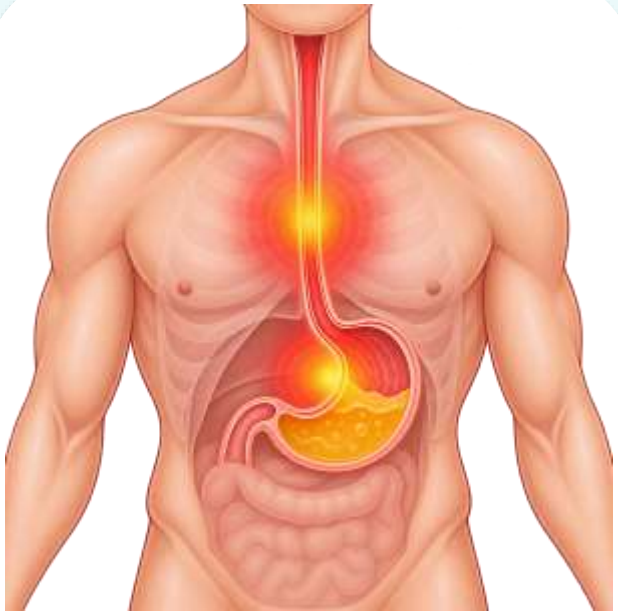
GERD & Dyspepsia

1. A practical visual guide for medical students and general practitioners
2. From symptoms to diagnosis, treatment, and referral
3. A connected 40-slide clinical learning pathway



CLINICAL TAKEAWAY • Assess risk, choose the right pathway, and reassess response.

Learning goals

1. Recognize typical GERD and dyspepsia symptoms
2. Identify when urgent assessment or upper endoscopy is needed
3. Apply first-line treatment and know when to refer



NEXT › We begin with a common primary-care complaint.

The first patient

1. A 35-year-old reports “burning after meals” for 3 months
2. Sometimes the sensation rises toward the chest
3. No vomiting, bleeding, weight loss, or dysphagia



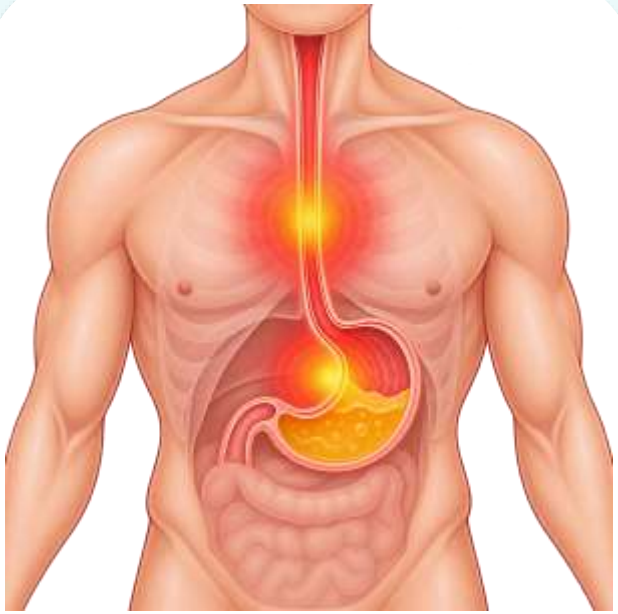
NEXT › Question: Is this reflux, dyspepsia, or something else?

Start by locating the symptom

1. Behind the sternum + upward burning → think heartburn / GERD

2. Upper central abdomen → think dyspepsia

3. Retrosternal pain may also be cardiac: evaluate concerning chest pain first



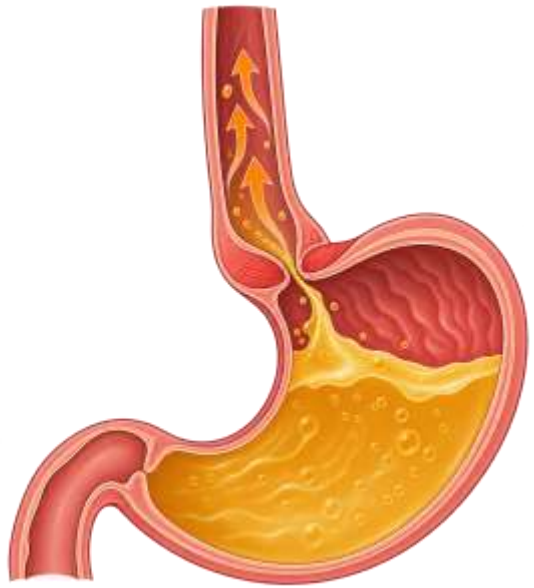
NEXT › Anatomical location guides the history, not the final diagnosis.

GERD: simple definition

1. GERD occurs when reflux of stomach contents causes troublesome symptoms or complications

2. Acid and non-acid gastric contents may reflux

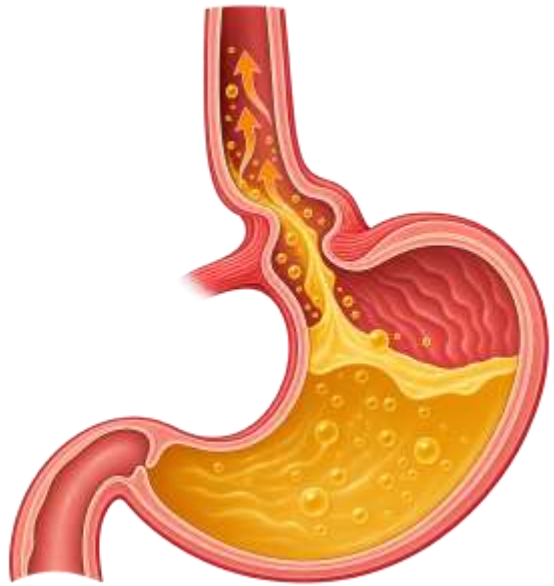
3. Typical symptoms are heartburn and regurgitation



NEXT › First understand why reflux happens.

Why does reflux happen?

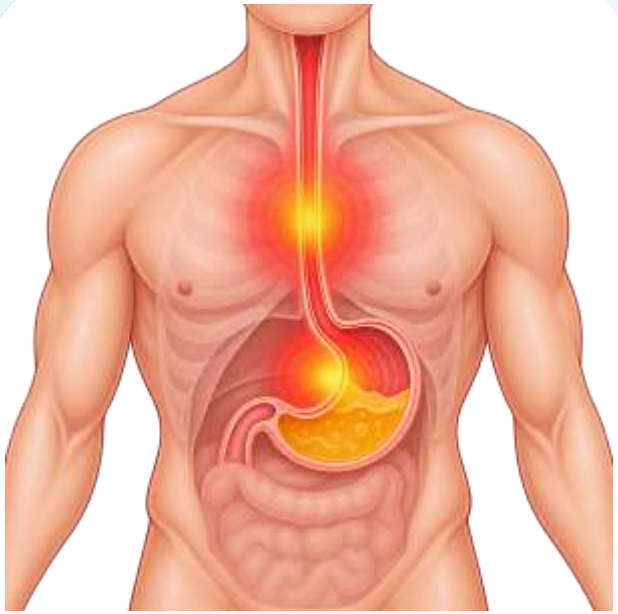
1. Transient relaxation or weakness of the lower esophageal sphincter (LES)
2. A hiatal hernia can weaken the anti-reflux barrier
3. Abdominal pressure, obesity, and lying after meals can worsen reflux



NEXT › Mechanism explains common triggers and lifestyle treatment.

Two classic GERD symptoms

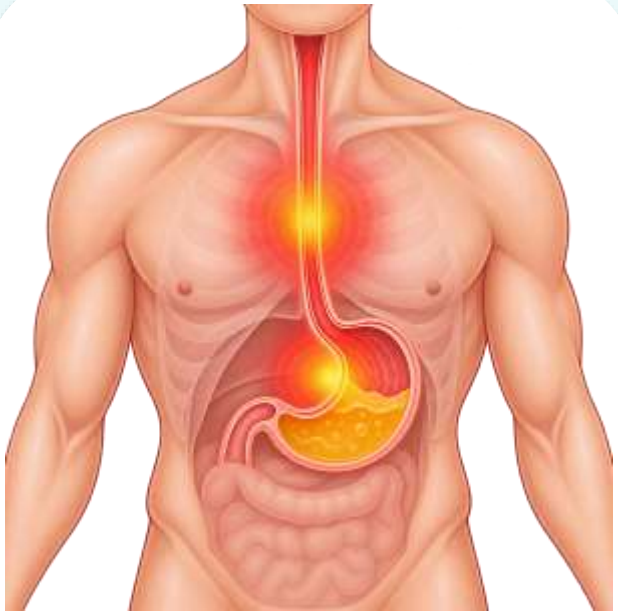
1. Heartburn: burning feeling behind the breastbone
2. Regurgitation: food or sour fluid returning toward the throat
3. Symptoms often worsen after meals or when lying down



NEXT › Now separate typical symptoms from less-specific ones.

Other possible presentations

1. Chest discomfort after cardiac causes are excluded
2. Cough, hoarseness, or throat symptoms may coexist
3. These extra-esophageal symptoms alone do not prove GERD



NEXT › Symptoms must be interpreted with clinical context.

Dyspepsia: simple definition

1. Dyspepsia is pain or discomfort centered in the upper abdomen

2. Common complaints: epigastric pain, burning, early satiety, post-meal fullness

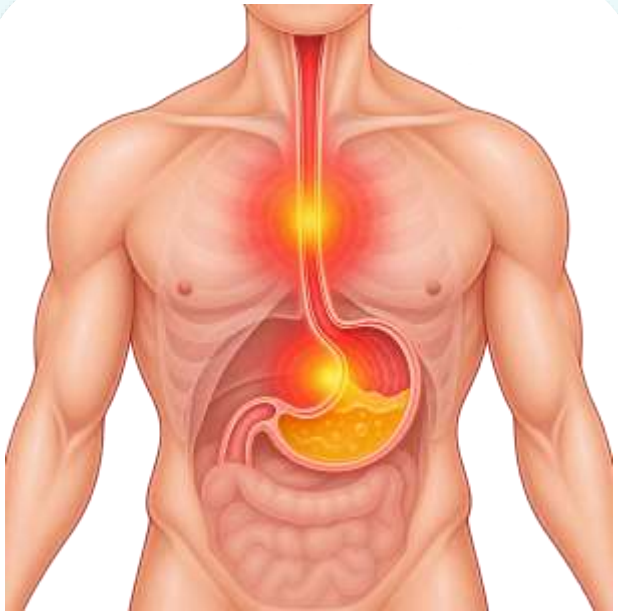
3. It is a symptom syndrome—not automatically excess acid



NEXT › Compare the two common syndromes.

GERD or dyspepsia?

1. GERD: retrosternal heartburn and regurgitation
2. Dyspepsia: epigastric discomfort, meal-related fullness, early satiety
3. The conditions can overlap in one patient



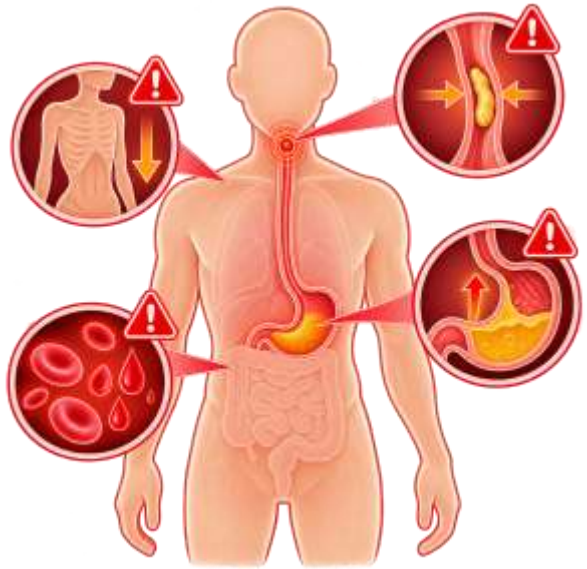
NEXT › Next decide whether the presentation is safe for empirical care.

The first safety question

1. Is there dysphagia, GI bleeding, severe anemia, weight loss, or persistent vomiting?

2. Are symptoms rapidly progressive, or is there cancer risk?

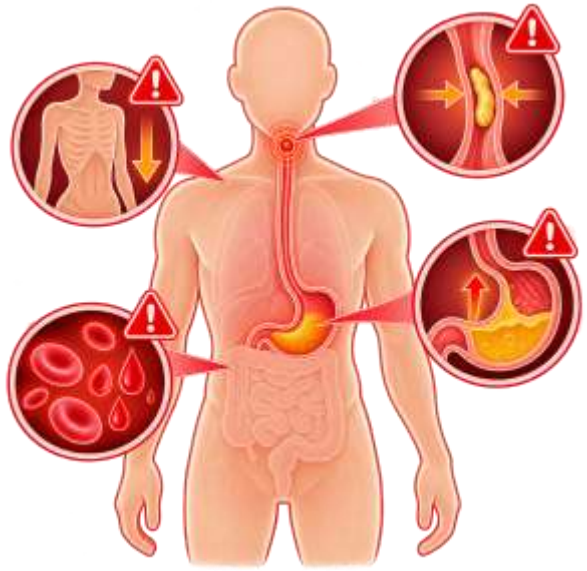
3. Chest pain with concerning features requires urgent cardiac evaluation



NEXT › Red flags change the pathway.

Alarm symptoms: what to do

1. Progressive dysphagia or food impaction → prompt evaluation
2. Hematemesis, melena, or hemodynamic compromise → urgent assessment
3. Weight loss, iron deficiency anemia, persistent vomiting → investigate



NEXT › Alarm features prompt individualized investigation rather than routine treatment alone.

Taking a focused history

1. Ask where symptoms occur, how long, and whether they relate to meals
2. Ask about nocturnal symptoms, dysphagia, bleeding, and weight loss
3. Review NSAIDs, aspirin, alcohol, smoking, and medicines



NEXT › A good history often identifies the most likely route.

Focused examination

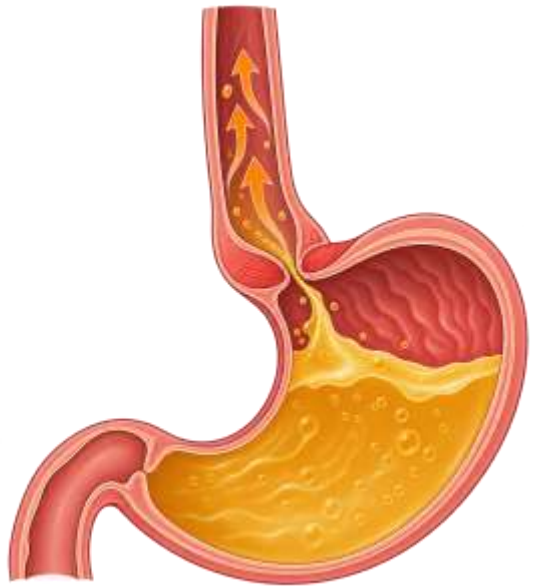
1. Check vital signs and general appearance
2. Assess for pallor, dehydration, abdominal tenderness, and masses
3. Normal examination does not exclude GERD or functional dyspepsia



NEXT › Decide what needs testing.

When GERD is likely

1. Typical heartburn or regurgitation + no alarm signs → clinical working diagnosis
2. Usually no immediate endoscopy is needed
3. Try an 8-week once-daily PPI before a meal



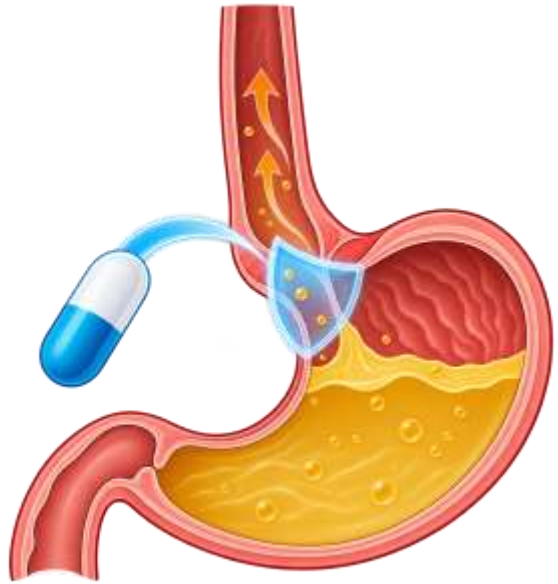
NEXT › This becomes the first GERD treatment step.

How PPIs work

1. PPIs inhibit the gastric proton pump and markedly reduce acid secretion

2. Examples: omeprazole, pantoprazole, esomeprazole

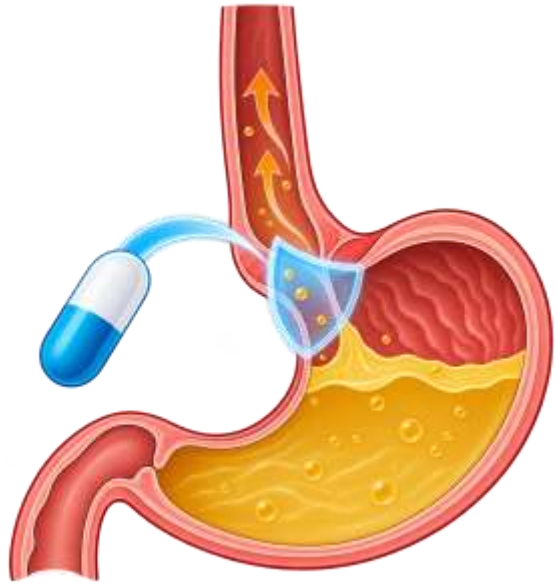
3. They treat acid-mediated symptoms and heal erosive esophagitis



NEXT › Correct timing is crucial.

Using a PPI correctly

1. Start standard-dose PPI once daily, usually 30–60 minutes before breakfast
2. Check adherence, timing, and symptom response
3. For typical uncomplicated GERD, reassess after 8 weeks



NEXT › Medication works best alongside targeted behaviors.

Lifestyle changes that matter

1. Weight loss if overweight or obese
2. Avoid meals 2–3 hours before bed; elevate head of bed for night symptoms
3. Reduce personally identified food triggers; avoid tobacco



NEXT › Most patients improve—what if they do not?

At the 8-week review

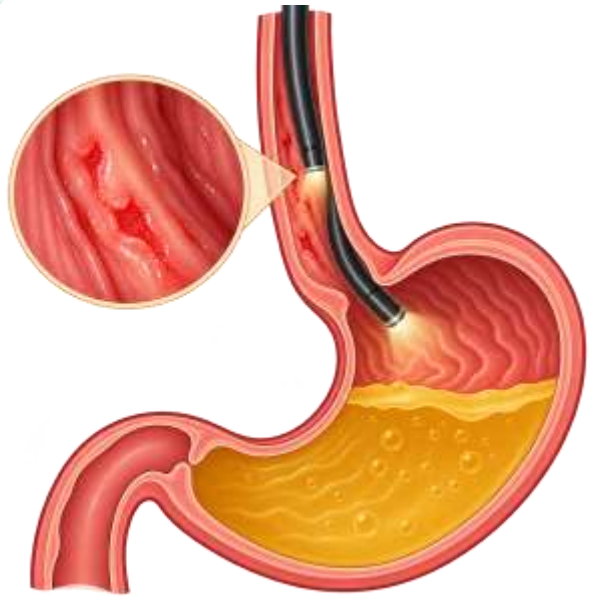
1. Symptoms resolved → try stopping or step down to lowest effective treatment
2. Symptoms persist → verify diagnosis, PPI adherence, and timing
3. Recurrent symptoms after stopping may require further assessment



NEXT › Next, investigate failure or uncertainty.

When is upper endoscopy useful?

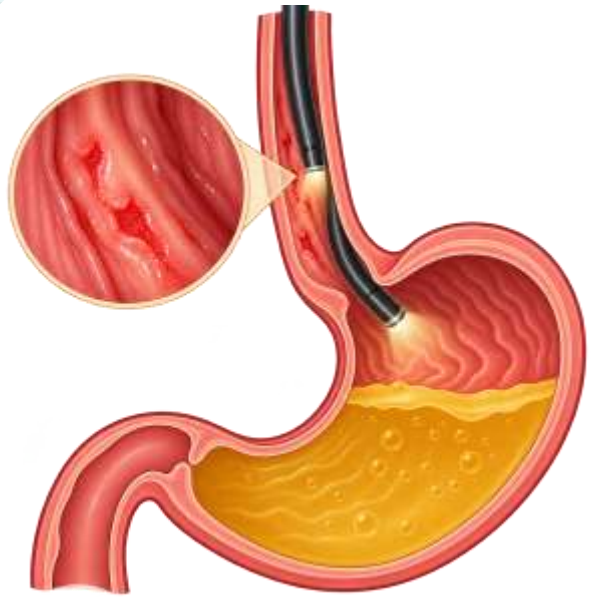
1. Alarm symptoms or concern for complications
2. Persistent or recurrent symptoms despite appropriate treatment
3. Evaluate erosive esophagitis, stricture, Barrett esophagus, or another cause



NEXT › An endoscopy can show injury but a normal result does not exclude reflux.

What can an endoscopy reveal?

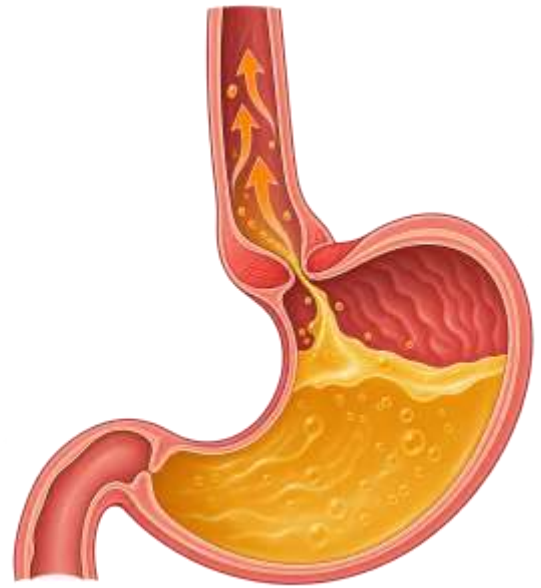
1. Erosive esophagitis or peptic stricture
2. Barrett esophagus in selected high-risk patients
3. Alternative diagnoses, including eosinophilic esophagitis



NEXT › Some patients need tests beyond endoscopy.

Reflux monitoring: the next test

1. Ambulatory pH or pH-impedance monitoring measures reflux burden
2. Often OFF PPI when GERD diagnosis is unproven
3. In proven GERD with persistent symptoms, consider impedance-pH ON PPI via specialist



NEXT › Objective testing helps avoid indefinite empirical treatment.

Persistent symptoms despite PPI

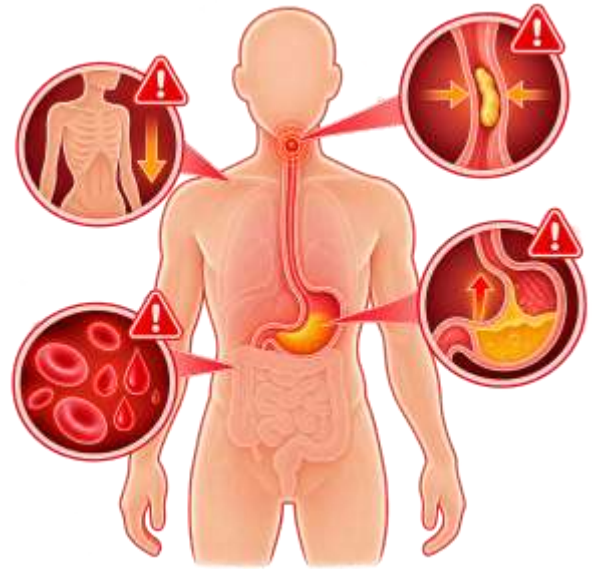
1. Confirm correct dose/timing and adequate trial first
2. Consider functional heartburn, reflux hypersensitivity, motility disorder, rumination, or dyspepsia
3. Refer for targeted endoscopy and/or reflux testing as appropriate



NEXT › Do not assume every symptom is acid reflux.

GERD complications

1. Erosive esophagitis can bleed
2. Peptic stricture causes progressive swallowing difficulty
3. Barrett esophagus is an intestinal-type change associated with increased cancer risk



NEXT › Now return to the patient whose discomfort is in the epigastrium.

A second patient

1. A 42-year-old feels full after a small meal
2. Upper abdominal burning occurs several days per week
3. No weight loss, melena, vomiting, or dysphagia



NEXT › This sounds more like dyspepsia. What causes it?

Causes of dyspepsia

1. Functional dyspepsia is common
2. Organic causes include peptic ulcer disease and H. pylori infection
3. Also consider medications and less-common gastric, biliary, or pancreatic disease



NEXT › Distinguish functional from structural disease.

Functional dyspepsia

1. Chronic upper-abdominal symptoms without explanatory structural disease after appropriate evaluation
2. Postprandial distress: early satiety and bothersome fullness
3. Epigastric pain syndrome: epigastric pain or burning



NEXT › The first steps depend on age and risk.

Dyspepsia: initial approach

1. Age ≥60 → usually arrange upper endoscopy (ACG/CAG guidance)
2. Age <60 without high-risk features → noninvasive H. pylori test-and-treat
3. Earlier endoscopy can be appropriate for important alarm or gastric-cancer risks



NEXT › Age is a guide, not a substitute for clinical judgment.

Why H. pylori matters

1. H. pylori colonizes the stomach and causes chronic gastritis

2. It can lead to peptic ulcers and increase gastric cancer risk

3. Eradication can improve dyspepsia in some patients and prevents complications



NEXT › Choose tests that identify ACTIVE infection.

How to test for H. pylori

1. Use urea breath test or stool antigen test

2. Stop PPI approximately 2 weeks before testing; stop antibiotics/bismuth 4 weeks before

3. Serology cannot reliably distinguish current from past infection



NEXT › A positive result leads to eradication therapy.

H. pylori treatment: key principles

1. Treat confirmed infection with a guideline-appropriate full regimen

2. In many settings, 14-day optimized bismuth quadruple therapy is preferred when susceptibility is unknown

3. Avoid empirical clarithromycin triple therapy without proven susceptibility



NEXT › All treated patients need a test of cure.

Confirm eradication

1. Test at least 4 weeks after antibiotics finish
2. Use breath test or stool antigen; stop PPI for 2 weeks beforehand
3. Do not use antibody testing to confirm cure



NEXT › What if the test is negative, or symptoms remain?

Dyspepsia after negative H. pylori

1. Try an appropriate standard-dose PPI course
2. Review NSAIDs and other irritating medications
3. Reassess response and reconsider diagnoses if symptoms persist



NEXT › Persisting symptoms call for structured next steps.

Managing functional dyspepsia

1. Explain the benign but sometimes chronic nature of the syndrome
2. Begin with H. pylori management (if present) and a PPI trial
3. If ineffective, consider low-dose TCA or selected prokinetic under individualized guidance



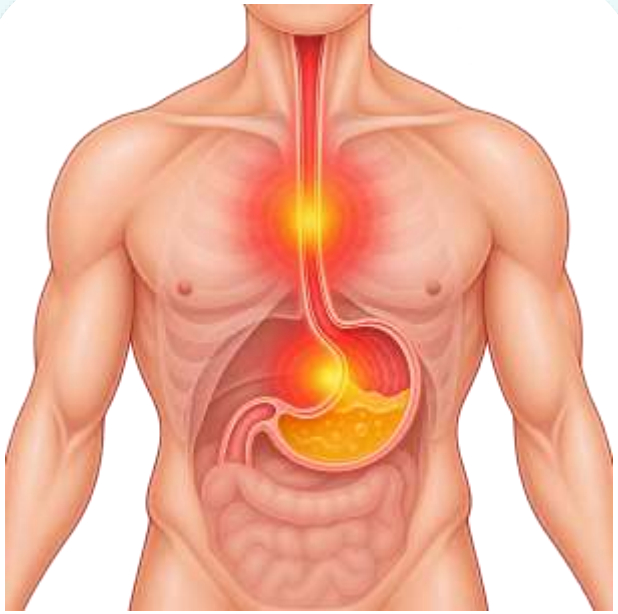
NEXT › Treatment targets the dominant symptom and patient impact.

GERD vs dyspepsia: one-page pathway

1. Heartburn + regurgitation → GERD pathway → 8-week PPI

2. Epigastric pain/fullness → dyspepsia pathway → age/risk assessment + H. pylori testing

3. Alarm signs or major risks → endoscopy / urgent referral as indicated



NEXT › Practice the pathway in short cases.

Clinical case 1: straightforward GERD

1. 28-year-old: heartburn after dinner, sour regurgitation, no alarm symptoms

2. Best next step: lifestyle advice + once-daily pre-meal PPI for 8 weeks

3. Follow-up: attempt step-down if symptoms settle



NEXT › Why no immediate gastroscopy? No alarm signs in typical GERD.

Clinical case 2: dyspepsia

1. 38-year-old: post-meal fullness and epigastric burning, no alarm signs
2. Best next step: noninvasive H. pylori test
3. If positive: treat and confirm cure; if negative: PPI trial



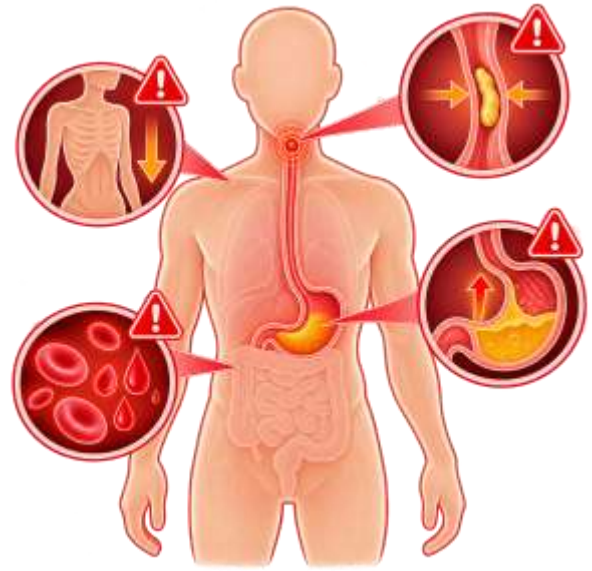
NEXT › Different symptom location leads to a different first step.

Clinical case 3: red flag

1. 67-year-old: new epigastric pain, weight loss, and iron deficiency anemia

2. Best next step: prompt upper endoscopy and appropriate workup

3. Do not mask important warning signs with repeated PPI prescriptions



NEXT › Red flags outweigh routine algorithms.

Five take-home messages

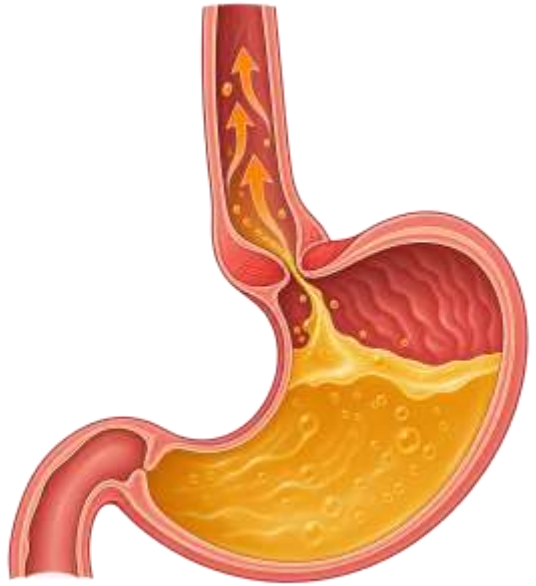
1. Heartburn/regurgitation suggest GERD; epigastric fullness/pain suggests dyspepsia
2. Always check red flags and cardiac causes of concerning chest pain
3. Typical uncomplicated GERD: 8-week PPI trial
4. Uninvestigated dyspepsia under 60: test and treat H. pylori
5. Verify response; refer when symptoms persist or risks are high



CLINICAL TAKEAWAY • Assess risk, choose the right pathway, and reassess response.

Guidelines and further reading

1. ACG GERD guideline — Katz et al., Am J Gastroenterol 2022;117:27–56
2. ACG/CAG Dyspepsia guideline — Moayyedi et al., Am J Gastroenterol 2017;112:988–1013
3. ACG H. pylori treatment guideline — Chey et al., Am J Gastroenterol 2024;119:1730–1753
4. AGA Personalized GERD Clinical Practice Update — 2022



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