GERD, PUD & *H. pylori*

Alarm features decide the first step · PPI timing before escalation · and the first-line eradication regimen changed in 2024

Clarithromycin triple
is no longer first-line

FIRST DECISION: SCOPE OR TREAT *alarm features are the whole triage*

⚠ ENDOSCOPY, NOT A PPI TRIAL

Dysphagia or odynophagia (structural until proven otherwise), **unintentional weight loss, GI bleeding, iron deficiency anemia, persistent vomiting, mass or lymphadenopathy, family history of upper GI cancer**, and **new dyspepsia at age 60 or older**, where malignancy risk justifies scoping rather than empiric therapy.

NO ALARM FEATURES, UNDER 60

Test-and-treat for H. pylori (urea breath or stool antigen): more effective and cheaper than empiric PPI where prevalence is meaningful, and it removes a curable cause instead of masking it. If negative or symptoms persist, **8-week empiric PPI, then reassess**, not renew forever. Typical GERD needs no up-front endoscopy.

WHEN IT WILL NOT SETTLE

pH or pH-impedance monitoring confirms pathologic reflux when endoscopy is normal and PPI response is poor, and is **required before anti-reflux surgery**. **Manometry** excludes achalasia masquerading as refractory reflux. **Think eosinophilic esophagitis** in younger patients with dysphagia or food impaction: biopsy even if the mucosa looks normal.

GERD MANAGEMENT *the fix is usually timing, not dose*

Step	Detail
⚠ PPI timing	**30-60 minutes BEFORE the first meal.** PPIs irreversibly bind only *actively secreting* pumps, and the meal is what recruits them; bedtime dosing on an empty stomach wastes most of the effect. **Wrong timing is the commonest cause of apparent PPI failure**, so confirm it before doubling the dose or doubting the diagnosis
Initial course	**Standard-dose PPI once daily for 8 weeks** for symptomatic GERD or erosive esophagitis, then step down to lowest effective dose, on-demand, or stop. H2 blockers for breakthrough nocturnal symptoms (tachyphylaxis with scheduled use)
Lifestyle that works	**Weight loss** (strongest evidence: intra-abdominal pressure drives reflux), **head-of-bed elevation and no eating within 3 h of lying down** for nocturnal symptoms, targeted trigger avoidance rather than blanket elimination diets, smoking and alcohol reduction (both lower sphincter tone)
Long-term PPI: real indications	**Barrett esophagus, LA grade C/D esophagitis, peptic stricture, hypersecretory states, and high-risk NSAID users** (prior ulcer/bleed, age 65+, concurrent anticoagulant, antiplatelet or steroid). **Everyone else gets a deprescribing attempt**
⚠ Stopping a PPI	**Taper, never stop abruptly.** Chronic suppression raises gastrin and expands parietal cell mass, so withdrawal produces **rebound hypersecretion worse than baseline for weeks**, which is routinely misread as relapse and re-anchors the prescription. Bridge with an H2 blocker or alternate-day dosing, and warn the patient the first 2 weeks are hardest
Surgery	Fundoplication or magnetic sphincter augmentation for objectively confirmed reflux with incomplete PPI response or large hiatal hernia, **only after pH study and manometry**. In obesity, **gastric bypass treats both while sleeve gastrectomy can worsen reflux**

H. PYLORI: THE 2024 CHANGE *the regimen most residents memorized is no longer first-line*

Regimen (all 14 days)	Components and when
Bismuth quadruple *preferred empiric first-line*	**PPI BID + bismuth QID + tetracycline QID + metronidazole TID-QID.** The empiric choice when susceptibility is unknown, and the regimen of choice with penicillin allergy or prior macrolide exposure. Black stools and tongue are harmless; no alcohol with metronidazole. **Pill burden is the adherence threat, so say so out loud**
Vonoprazan dual	Vonoprazan BID + high-dose amoxicillin. A potassium-competitive acid blocker gives faster, more sustained suppression; **non-inferior to bismuth quadruple with fewer adverse events** and a simpler regimen. Not with penicillin allergy
Rifabutin triple	Omeprazole + amoxicillin + rifabutin. Empiric alternative or salvage; rifabutin resistance remains rare. Watch myelosuppression and rifamycin drug interactions
⚠ **Clarithromycin triple**	**RETIRED as empiric first-line (ACG 2024)** because US clarithromycin resistance crossed the threshold of usefulness. Use only with **documented susceptibility**, and never after prior macrolide exposure. Levofloxacin regimens carry the same caveat
Failure and salvage	**Never reuse an antibiotic the patient already failed**: resistance is the likeliest reason, so repeating it repeats the failure. Bismuth quadruple after failed clarithromycin; rifabutin or vonoprazan-based after failed bismuth quadruple. **Susceptibility testing after two failures**
Who to test	**Active or prior peptic ulcer** (eradication converts a relapsing disease into a cured one), **gastric MALT lymphoma** (eradication alone can induce remission in early disease), uninvestigated dyspepsia under 60, functional dyspepsia, **early gastric cancer after resection and first-degree relatives of gastric cancer patients**, long-term NSAID/aspirin users with ulcer history, unexplained iron deficiency anemia, and ITP

TESTING AND ULCER CARE *the false negative you will cause, and the ulcer you must re-scope*

⚠ HOW TO GET A FALSE NEGATIVE

Hold PPIs 2 weeks and antibiotics or bismuth 4 weeks before testing. Suppressed bacterial load is the commonest reason an infected patient is told they are clear. **Serology cannot confirm cure** (IgG persists for life after eradication), so use urea breath or stool antigen. **Test-of-cure at 4+ weeks after therapy is mandatory**: eradication failure is common enough that assuming success is unsafe.

ULCER CARE BEYOND ERADICATION

Gastric ulcers are biopsied at diagnosis and re-scoped at 8-12 weeks, because a malignant ulcer can look benign and can *partially heal* on acid suppression, which is exactly the false reassurance that delays a cancer diagnosis. Duodenal ulcers carry negligible malignancy risk. **Stop the NSAID if possible**; if not, co-prescribe a PPI. **An ulcer negative for both H. pylori and NSAIDs** needs a second look: Zollinger-Ellison (fasting gastrin off PPI), Crohn disease, malignancy, or unreported over-the-counter analgesics.

PEARLS & PITFALLS

- **Duodenal ulcer pain is relieved by food; gastric ulcer pain is worsened by it**, which is why gastric ulcer patients avoid eating and lose weight, adding an alarm feature to a disease that already needs biopsy.
- **Ask about NSAIDs explicitly, including over-the-counter.** Patients do not volunteer "just ibuprofen," and H. pylori plus NSAIDs frequently coexist: finding one does not excuse you from the other.
- **Extraesophageal reflux (cough, hoarseness, asthma) is rarely the sole cause** of those symptoms, and treating them with a PPI alone often fails: this indication is where years of unnecessary acid suppression begin.
- **If you test for H. pylori you must be ready to treat and to confirm cure.** There is no role for finding it and leaving it.
- **Barrett esophagus is intestinal metaplasia, the precursor to adenocarcinoma:** surveillance interval follows dysplasia grade, and **dysplasia is treated endoscopically (ablation or resection), not merely watched**.

References: ACG clinical guideline on treatment of Helicobacter pylori infection (2024) · ACG clinical guideline for the diagnosis and management of GERD · ACG guideline on management of dyspepsia · AGA guidance on PPI deprescribing.

Educational aid; verify against current guidance, local formulary and patient factors.

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