

GERD · Gastroesophageal Reflux Disease

A plain-English guide for you and your family

WHAT IS HAPPENING

Picture your stomach and the tube that brings food down to it. At the bottom of your food tube (esophagus), a ring of muscle called the lower esophageal sphincter (LES) acts like a one-way door: it opens to let food drop into the stomach, then clamps shut to keep stomach acid from splashing back up. Your stomach makes strong acid to break down food, and the stomach's own lining has a thick protective coat so the acid does not hurt it. Your food tube has no such coat — it is built for swallowing, not acid baths. In GERD, that muscle door (the LES) relaxes when it should not, or it loses its grip strength. Sometimes extra weight or pregnancy pushes up on the stomach like squeezing a toothpaste tube.

Sometimes a hiatal hernia (a gap in the diaphragm muscle that lets part of the stomach slide up into the chest) makes the door leak. Food that sits in the stomach too long also gives acid more chances to slosh upward. When acid bathes the food tube again and again, you feel a burning behind your breastbone (heartburn). Acid can creep higher and reach your throat, making you cough, sound hoarse, or wake up choking. Over months and years, the acid burns the lining, leaving scar tissue that can tighten the tube and make swallowing harder. In some people, the burned lining tries to protect itself by growing a tougher kind of cell (Barrett's esophagus), which slightly raises the risk of cancer. None of this is random — each problem flows from that leaky door and the acid doing what acid does: burning anything unprotected.

What you might feel

- Burning feeling in the chest (heartburn)
- Sour or bitter taste in the mouth (regurgitation)
- Trouble swallowing (dysphagia)
- Chest pain (non-cardiac chest pain)
- Chronic cough or throat clearing
- Hoarse voice or sore throat
- Worsening asthma or wheezing
- Unintended weight loss

- Vomiting blood or black, tarry stools
- Pain with swallowing (odynophagia)

Call the doctor right away if...

- Trouble swallowing or pain when swallowing
- Unintended weight loss
- Vomiting blood or passing black, tarry stools
- New reflux symptoms starting after age 60
- Anemia (low red blood cell count) without an obvious cause

What the care team will do

- Check for alarm signs - trouble swallowing, painful swallowing, weight loss, bleeding, age over 60 with new symptoms, or frequent vomiting - and notify provider immediately if present
- Teach patient to take PPI medicine 30 to 60 minutes before breakfast on an empty stomach every day
- Educate patient to stop eating 2 to 3 hours before bedtime and avoid lying flat after meals
- Teach patient to raise the head of bed 6 to 8 inches using blocks under bed legs, not just pillows
- Review trigger foods to avoid - caffeine, alcohol, chocolate, peppermint, spicy foods, fatty foods, citrus, tomatoes
- Encourage weight loss if BMI over 25 through diet and exercise referrals
- Assess for medication causes - calcium channel blockers, nitrates, benzodiazepines, anticholinergics - and discuss alternatives with provider
- Schedule 8-week follow-up to assess symptom response and check if PPI can be stepped down to lowest effective dose

Medicines you may be given — and why

Omeprazole (Prilosec), Esomeprazole (Nexium), Lansoprazole (Prevacid), Pantoprazole (Protonix)

A PPI blocks the tiny pumps inside the stomach lining that squirt acid into the stomach. With fewer pumps working, the stomach makes much less acid. Less acid means less burning when stomach juice flows backward into the throat. Most people take one pill in the morning, thirty

minutes before eating, for eight weeks. Some people with severe GERD need two doses a day or long-term treatment.

Famotidine (Pepcid), Nizatidine (Axid)

An H2 blocker sits on the histamine docking sites (H2 receptors) on the stomach's acid-making cells. When histamine cannot land, the cells get a weaker signal to make acid, so acid production drops by about 50–70%. H2 blockers work faster than PPIs (within an hour) but wear off after 6–12 hours, so they are often used at bedtime to prevent nighttime reflux or as a backup when a PPI does not fully cover symptoms.

Calcium carbonate (Tums), Magnesium hydroxide (Milk of Magnesia), Aluminum hydroxide, Sodium bicarbonate

An antacid is a base (the chemical opposite of an acid) that instantly neutralizes stomach acid already in the stomach. It does not stop new acid from being made; it just turns the acid that is there into water and salt, raising the pH and giving fast relief from heartburn. Antacids work within minutes but last only 30–60 minutes, so they are used for quick rescue, not for healing the esophagus.

Sodium alginate + antacid (Gaviscon)

Alginate is a seaweed extract that reacts with stomach acid to form a thick, sticky foam raft that floats on top of the stomach contents. This raft acts like a physical barrier, so when you lie down or bend over and stomach juice sloshes upward, the foam reaches the esophagus first instead of the burning acid. The antacid part neutralizes acid to help the foam form and gives quick symptom relief. Alginate is taken after meals and at bedtime.

Metoclopramide (Reglan)

Metoclopramide blocks dopamine receptors in the gut's nerve network, which speeds up stomach emptying and tightens the lower esophageal sphincter a bit. Faster emptying means less time for food and acid to sit in the stomach and reflux backward. It is used only when GERD symptoms persist despite acid-suppressing drugs and when delayed stomach emptying (gastroparesis) is part of the problem. It is not a first-line GERD drug because of side-effect risks.

Where this information comes from

- ACG Clinical Guideline: Diagnosis and Management of Gastroesophageal Reflux Disease (2022)
- American Gastroenterological Association
- UpToDate Clinical Decision Support

- NEJM Review Articles on GERD

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