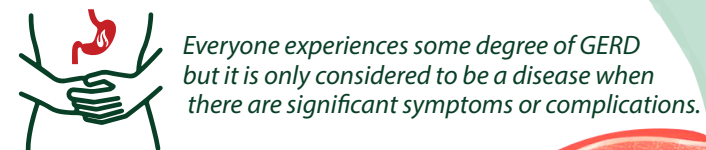


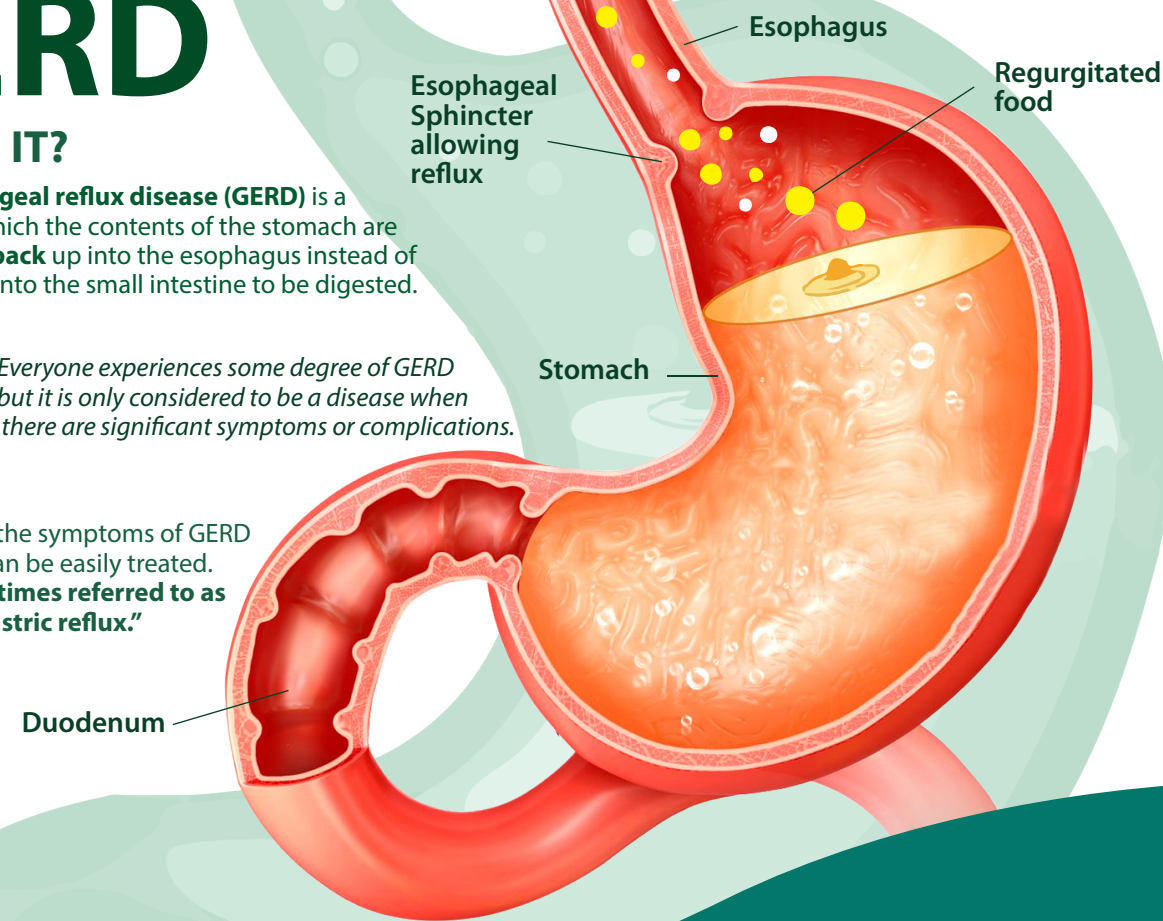
# GERD

## WHAT IS IT?

**Gastroesophageal reflux disease (GERD)** is a condition in which the contents of the stomach are **regurgitated back** up into the esophagus instead of passing down into the small intestine to be digested.



In most cases, the symptoms of GERD are mild and can be easily treated. GERD is sometimes referred to as "reflux" or "gastric reflux."



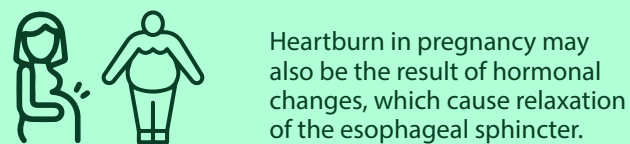
## WHAT ARE THE SYMPTOMS OF GERD?

The most common symptom of GERD is **HEARTBURN**. This is a burning sensation in the esophagus caused by acid from the stomach coming back up through the separating valve. It often occurs after meals or when lying down. Heartburn worsens with:



## COMMON CASES OF HEARTBURNS

Heartburn is common in both pregnancy and obesity because of increased pressure within the abdomen that pushes the contents of the stomach upward.



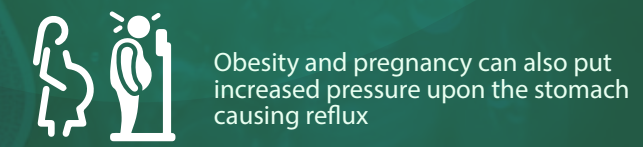
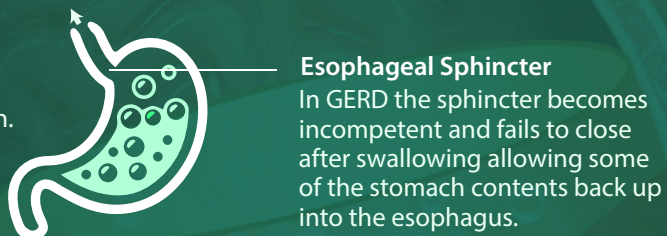
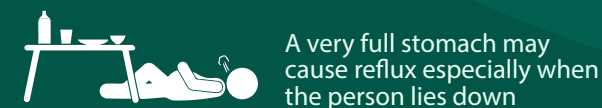
- 1** Heartburn can aggravate breathing in some people, particularly those with asthma.
- 2** If you experience this type of pain your doctor will check for other signs of heart disease.
- 3** The presence of stomach acid in the mouth may also cause dental disease.
- 4** Sometimes regurgitation of the stomach contents into the mouth will occur, causing a bitter taste.
- 5** Acid reflux may also cause hoarseness or discomfort in the throat.



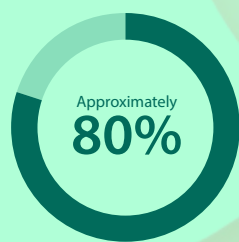
Of people with GERD also develop a condition known as Barrett's esophagus.

## WHAT CAUSES GERD?

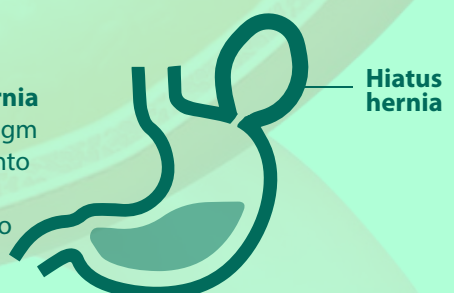
The **esophageal sphincter** is a valve located at the base of the esophagus where it joins the stomach. This muscular valve normally relaxes during swallowing to allow food to pass into the stomach and then closes again.



### Other causes contributing to GERD



**of people with GERD also have a hiatus hernia** (a condition where a weakness of the diaphragm allows part of the stomach to be pushed up into the chest, affecting the valve mechanism) However, many people with a hiatus hernia do not have symptoms of GERD



## HOW IS GERD DIAGNOSED ?

Your doctor might be able to diagnose GERD based on a physical examination and history of your signs and symptoms. **To confirm a diagnosis of GERD, or to check for complications, your doctor might recommend:**



**UPPER ENDOSCOPY**  
A thin, flexible tube equipped with a light and camera (endoscope) is inserted down your throat, to examine the inside of your esophagus and stomach.



**AMBULATORY ACID (PH) PROBE TEST**  
A monitor is placed in your esophagus to identify when, and for how long, stomach acid regurgitates there. The monitor connects to a small computer that you wear around your waist or with a strap over your shoulder.



**X-RAY OF YOUR UPPER DIGESTIVE SYSTEM**  
X-rays are taken after you drink a chalky liquid that coats and fills the inside lining of your digestive tract. The coating allows your doctor to see a silhouette of your esophagus, stomach and upper intestine.



**UPPER ENDOSCOPY**  
This test measures the rhythmic muscle contractions in your esophagus when you swallow. Esophageal manometry also measures the coordination and force exerted by the muscles of your esophagus.



You may also be asked to swallow a barium pill that can help diagnose a narrowing of the esophagus that may interfere with swallowing.

## TREATMENT OF GERD

Lifestyle changes may help reduce the frequency of acid reflux.



**MAINTAIN A HEALTHY WEIGHT**  
Excess pounds put pressure on your abdomen, pushing up your stomach and causing acid to reflux into your esophagus.



**STOP SMOKING**  
Smoking decreases the lower esophageal sphincter's ability to function properly.



**ELEVATE THE HEAD OF YOUR BED**  
If you regularly experience heartburn while trying to sleep, place wood or cement blocks under the feet of your bed so that the head end is raised by 6 to 9 inches. If you can't elevate your bed, you can insert a wedge between your mattress and box spring to elevate your body from the waist up. Raising your head with additional pillows isn't effective.



**DON'T LIE DOWN AFTER A MEAL**  
Wait at least three hours after eating before lying down or going to bed.



### EAT FOOD SLOWLY AND CHEW THOROUGHLY

Put down your fork after every bite and pick it up again once you have chewed and swallowed that bite.



### AVOID FOODS AND DRINKS THAT TRIGGER REFLUX

Common triggers include fatty or fried foods, tomato sauce, alcohol, chocolate, mint, garlic, onion, and caffeine.



### AVOID TIGHT-FITTING CLOTHING

Clothes that fit tightly around your waist put pressure on your abdomen and the lower esophageal sphincter.

## SUBSTITUTE FOR ESOPHAGEAL SPHINCTER

Your doctor is likely to recommend that you first try lifestyle modifications and over-the-counter medications.



Prescription medication



Surgery

If you don't experience relief within a few weeks, your doctor might recommend prescription medication or surgery.

## Over-the-counter medications

**Antacids that neutralize stomach acid.** Antacids, such as Mylanta, Rolaids and Tums, may provide quick relief. But antacids alone won't heal an inflamed esophagus damaged by stomach acid. Overuse of some antacids can cause side effects, such as diarrhea or sometimes kidney problems.

**Medications to reduce acid production.** These medications — known as H-2-receptor blockers — include cimetidine (Tagamet HB), famotidine (Pepcid AC), nizatidine (Axid AR) and ranitidine (Zantac). H-2-receptor blockers don't act as quickly as antacids, but they provide longer relief and may decrease acid production from the stomach for up to 12 hours. Stronger versions are available by prescription.

**Medications that block acid production and heal the esophagus.** These medications — known as proton pump inhibitors — are stronger acid blockers than H-2-receptor blockers and allow time for damaged esophageal tissue to heal. Over-the-counter proton pump inhibitors include lansoprazole (Prevacid 24 HR) and omeprazole (Prilosec OTC, Zegerid OTC).

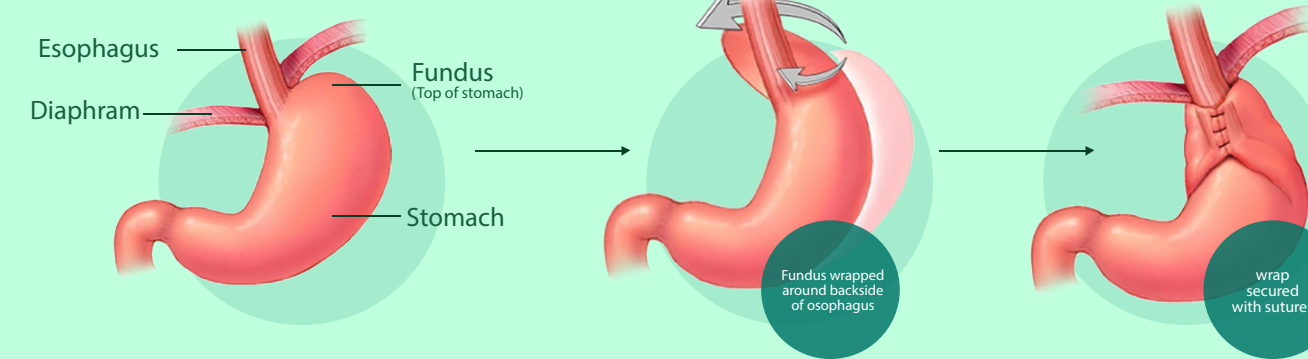
**Medication to strengthen the lower esophageal sphincter**

## Surgery and other procedures

GERD can usually be controlled with medication. But if medications don't help or you wish to avoid long-term medication use, your doctor might recommend:

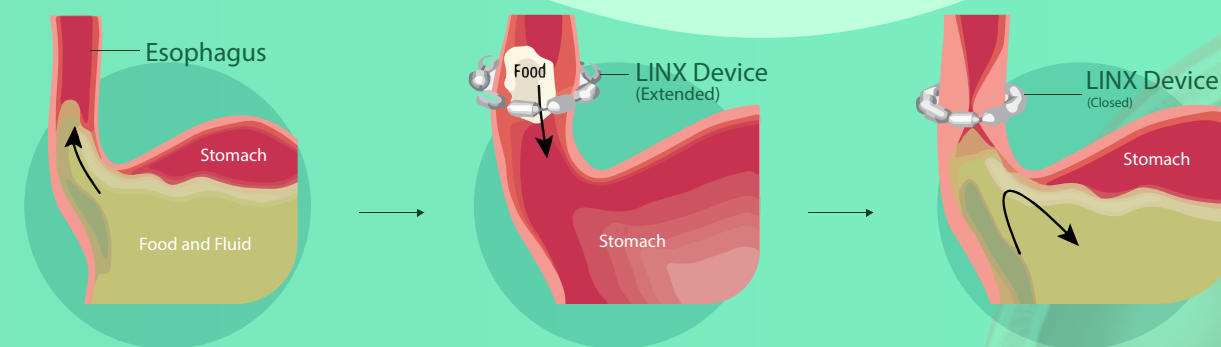
### 1 FUNDOPLICATION

The surgeon wraps the top of your stomach around the lower esophageal sphincter, to tighten the muscle and prevent reflux. Fundoplication is usually done with a minimally invasive (laparoscopic) procedure. The wrapping of the top part of the stomach can be partial or complete.



### 2 LINX DEVICE

A ring of tiny magnetic beads is wrapped around the junction of the stomach and esophagus. The magnetic attraction between the beads is strong enough to keep the junction closed to refluxing acid, but weak enough to allow food to pass through. The Linx device can be implanted using minimally invasive surgery.



## CONTACTS

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## RESEARCH

We carry out ethically approved research which aims to improve patient care. Whilst you are in Endoscopy, the Gastroenterology Research Nurses may look at your notes to see if you fit the criteria for any of our studies. If you are suitable, you may be asked whether you would like to take part in a study.



# GASTROESOPHAGEAL REFLUX DISEASE (GERD)

A Briteaid Health and Janssen Pharmaceutical Companies of Johnson and Johnson Initiative