



SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT OF PHYSICIAN ASSISTANT

COURSE NAME: SURGERY

II YEAR

UNIT II: OESOPHAGUS

TOPIC 1: REFLEX



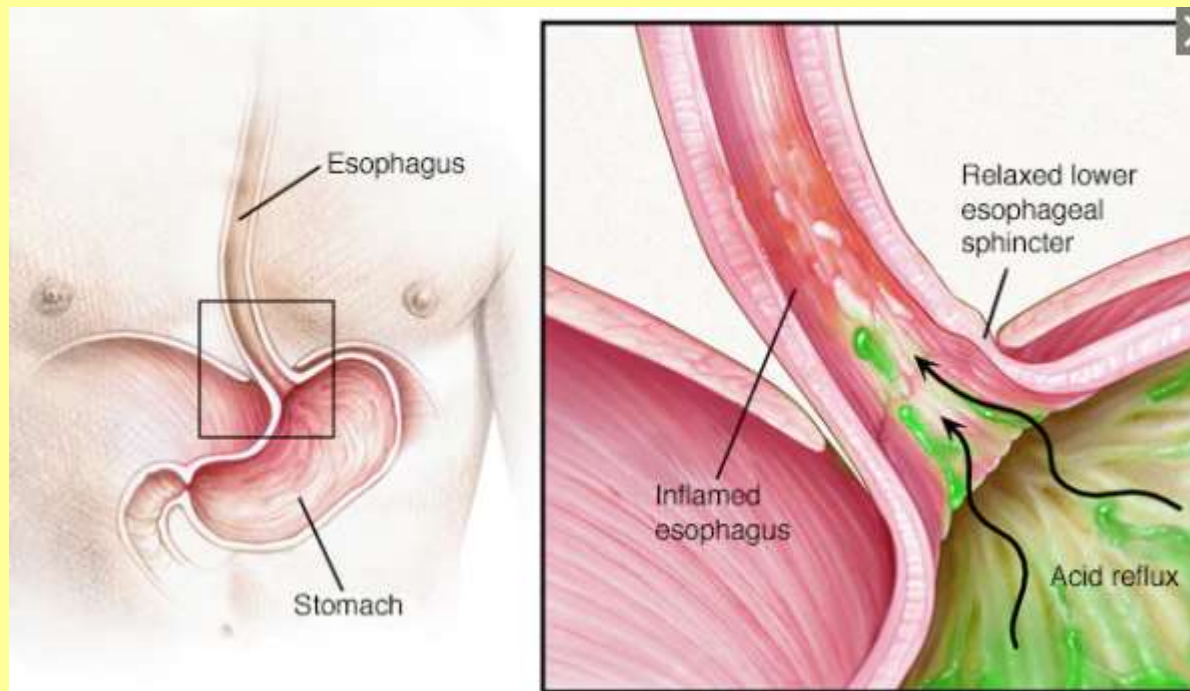
Definition



- A digestive disease in which stomach acid or bile irritates the food pipe lining.
- This is a chronic disease that occurs when stomach acid or bile flows into the food pipe and irritates the lining. Acid reflux and heartburn more than twice a week may indicate GERD.



Reflex





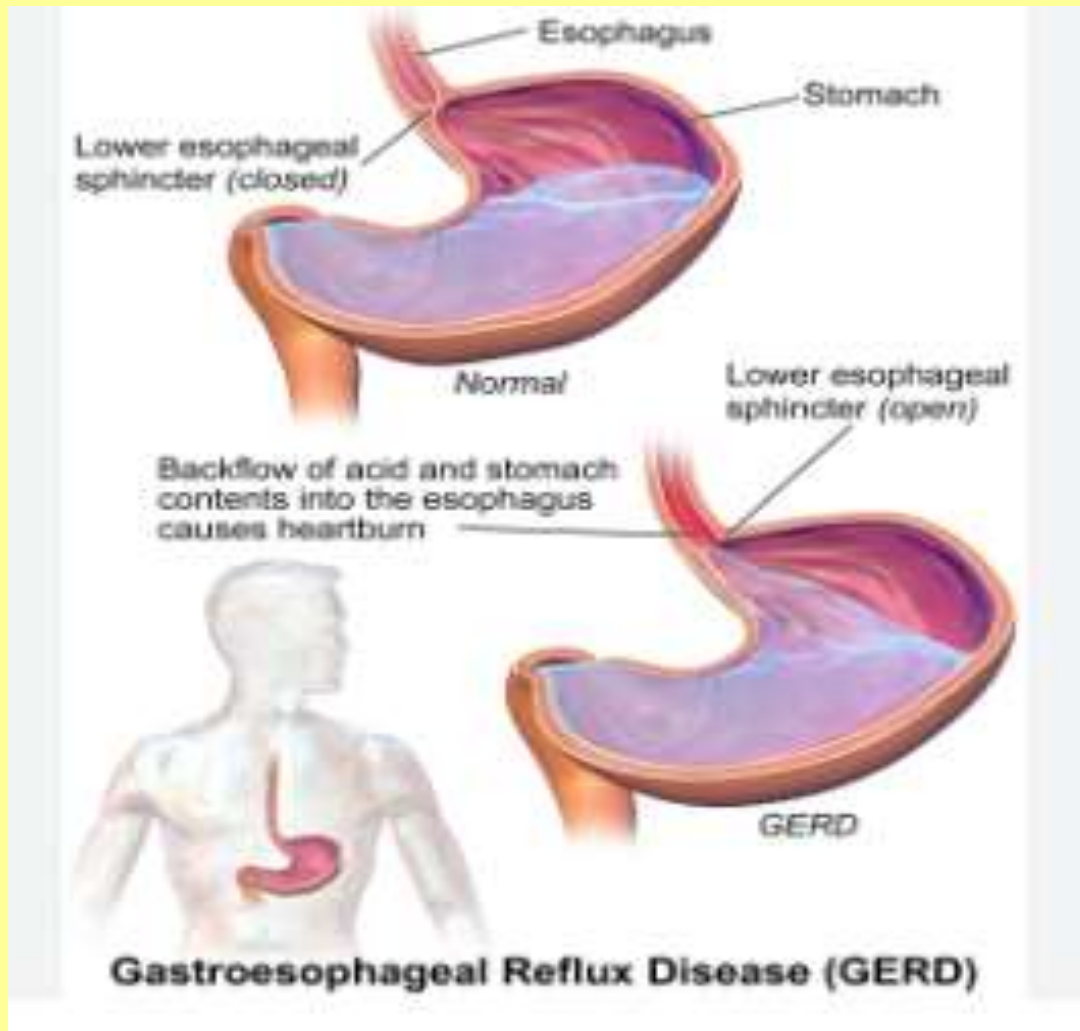
Causes



- certain food and drink – such as coffee, tomatoes, alcohol, chocolate and fatty or spicy foods.
- being overweight.
- smoking.
- pregnancy.
- stress and anxiety.
- an increase in some types of hormones, such as progesterone and oestrogen.



Pathophysiology





signs & symptoms



- burning pain in the chest that usually occurs after eating and worsens when lying down.
- belching, heartburn, nausea, or regurgitation
- bitter taste, discomfort in upper abdomen, or dry cough



Risk factors



- Obesity
- Bulging of the top of the stomach up above the diaphragm (hiatal hernia)
- Pregnancy
- Connective tissue disorders, such as scleroderma
- Delayed stomach emptying



Factors that can aggravate acid reflux include:

- Smoking
- Eating large meals or eating late at night
- Eating certain foods (triggers) such as fatty or fried foods
- Drinking certain beverages, such as alcohol or coffee
- Taking certain medications, such as aspirin



chronic inflammation can cause:

- **Inflammation of the tissue in the esophagus** (esophagitis). Stomach acid can break down tissue in the esophagus, causing inflammation, bleeding, and sometimes an open sore (ulcer). Esophagitis can cause pain and make swallowing difficult.
- **Narrowing of the esophagus** (esophageal stricture). Damage to the lower esophagus from stomach acid causes scar tissue to form. The scar tissue narrows the food pathway, leading to problems with swallowing.
- **Precancerous changes to the esophagus** (Barrett esophagus). Damage from acid can cause changes in the tissue lining the lower esophagus. These changes are associated with an increased risk of esophageal cancer.



- Upper endoscopy - to improve trouble swallowing (dysphagia).
- Ambulatory acid (pH) probe test - to identify when, and for how long, stomach acid regurgitates
- X-ray of the upper digestive system-to swallow a barium pill that can help diagnose a narrowing of the esophagus that may interfere with swallowing.
- Esophageal manometry-measures the coordination and force exerted by the muscles of esophagus.
- Transnasal esophagoscopy-This test is done to look for any damage in the esophagus



Medical management



- Antacids that neutralize stomach acid. Antacids containing calcium carbonate
- Medications to reduce acid production. These medications — known as histamine (H-2) blockers — include cimetidine (Tagamet HB), famotidine (Pepcid AC) and nizatidine (Axid AR).
- Medications that block acid production and heal the esophagus. These medications — known as proton pump inhibitors — are stronger acid blockers than H-2 blockers and allow time for damaged esophageal tissue to heal.



Medical management



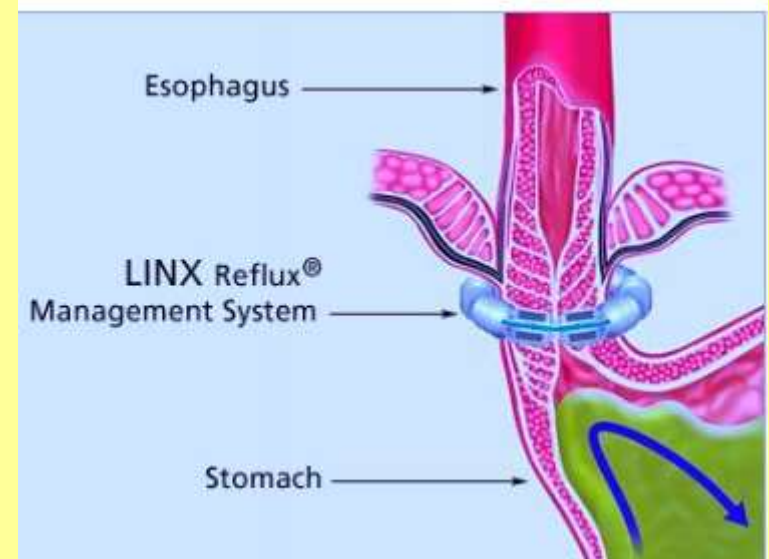
- strength proton pump inhibitors. These include esomeprazole (Nexium), lansoprazole (Prevacid), omeprazole (Prilosec), pantoprazole (Protonix), rabeprazole (Aciphex) and dexlansoprazole (Dexilant).
- strength H-2 blockers. These include prescription-strength famotidine and nizatidine. Side effects from these medications are generally mild and well tolerated



Procedures



- **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. The magnetic beads do not have an effect on airport security or magnetic resonance imaging.

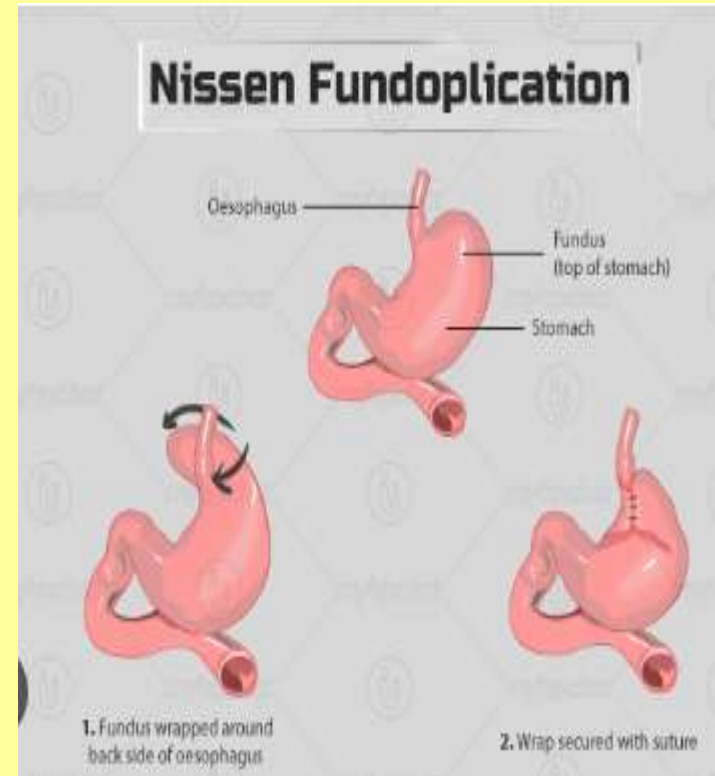




Fundoplication



- **Fundoplication.** The surgeon wraps the top of the 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 complete (Nissen fundoplication) or partial. The most common partial procedure is the Toupet fundoplication.

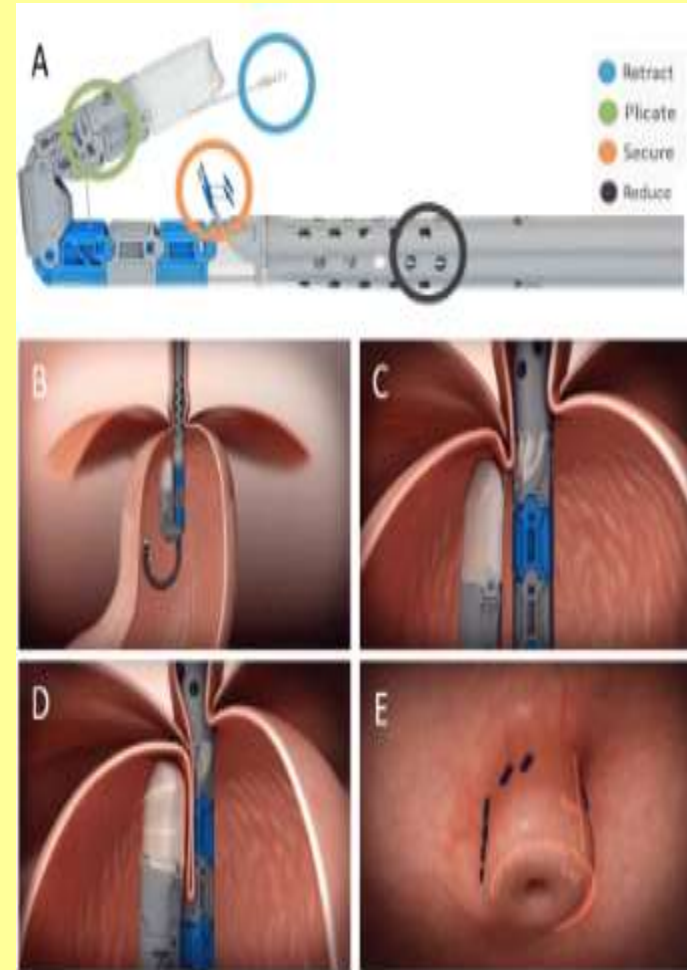




transoral incisionless fundoplication



- **Transoral incisionless fundoplication (TIF).** This new procedure involves tightening the lower esophageal sphincter by creating a partial wrap around the lower esophagus using polypropylene fasteners. TIF is performed through the mouth by using an endoscope and requires no surgical incision. Its advantages include quick recovery time and high tolerance.





Conservative management



- Stop smoking
- Elevate the head when patient lying
- Eat food slowly and chew thoroughly
- Avoid foods and drinks that trigger reflux.
- Avoid tight-fitting clothing