

Week 5 GI

GERD

Pretest:

- Commonly associated with the loss of muscle tone at the lower esophageal sphincter (LES)
- Larger volumes of gastric contents generally increase gastric pressure, stimulating peristalsis and promoting a faster rate of gastric emptying. Hypertonic solutions (and hypotonic), having a higher osmotic pressure than the surrounding tissues, tend to delay gastric emptying.
- Obesity, smoking, and hiatal hernia = risk factors

Physiology of GI tract

- Mouth, esophagus, stomach, small intestine, large intestine, rectum, anus
- Responsible for breaking down ingested food, nutrient absorption, maintaining body water, eliminating waste
- Hormones and the autonomic nervous sys. regulate most digestive activities: hormone release, gastric motility, substance for digestion

Physiology of Gastric Emptying

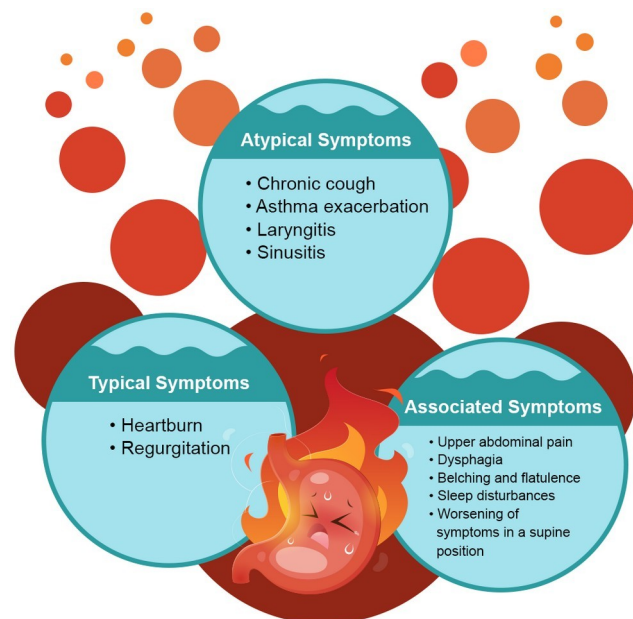
- Depending on volume, osmotic pressure, and chemical composition of gastric contents
- Longer to digest and break solids and fat == slower rate of emptying

Pathophysiology of GERD: backflow of acid or bile, caused by:

- Lower esophageal sphincter fn: decreased tone allows acid to regurg into the esophagus
- Esophageal motility: disrupted coordinated contraction causes delayed gastric emptying
- Delayed gastric emptying: causes esophagitis by extending the period during which reflux can occur and increasing the acid content of chyme.

Clinical Manifestations: classic symptom = heartburn (pyrosis)

- Typical
 - Pyrosis: behind the sternum. **HALLMARK**
 - Regurgitation: sour or bitter taste
- Atypical
 - Chronic cough (irritation of the airway): persistent and not always accompanied by heartburn
 - Asthma exacerbation (acid regurg into the airways): triggers or worsens asthma
 - Laryngitis: inflammation of the voiced box
 - Sinusitis: irritation and inflammation of the sinuses
- Associated symptoms
 - Upper abd pain, especially within one hour of eating
 - Dysphagia: food sticking in the throat or hard to swallowing
 - Belching and flatulence
 - Sleep disturbances
 - Worsening of s/s in supine, esp. after meals



Risk factors: obesity, smoking, hiatal hernia

- Obesity: slows gastric emptying == prolonged retention of food in the stomach and risk of reflux
- Smoking: weakens the lower esophageal sphincter Fn
- Hiatal hernia: a structural risk factor. The stomach protrudes through the diaphragmatic opening, impacting sphincter == less effective in preventing the backflow of stomach contents into the esophagus

Dx and Tx

- Dx: based on hx and clinical manifestations.
- Tx: