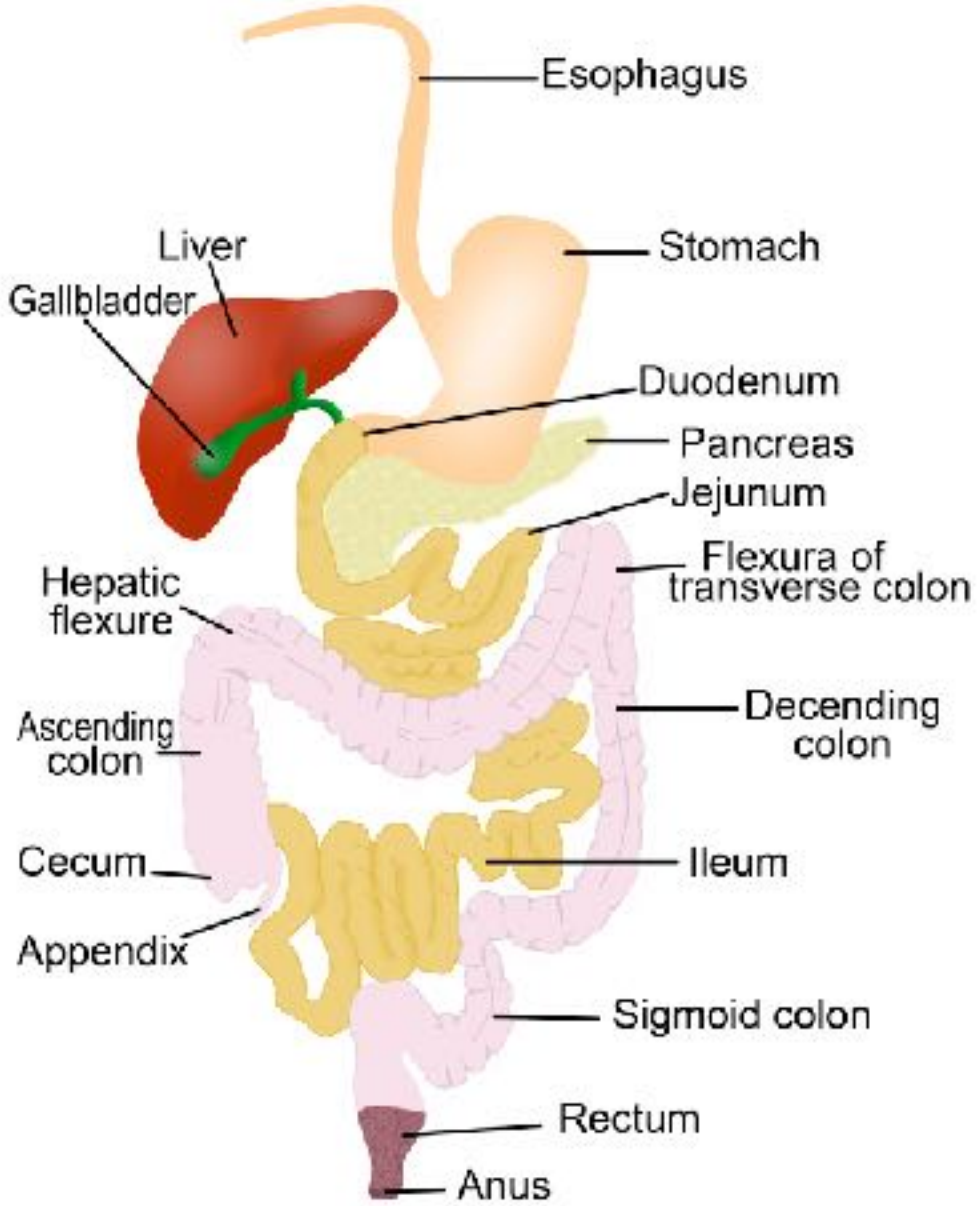
Peptic Ulcers

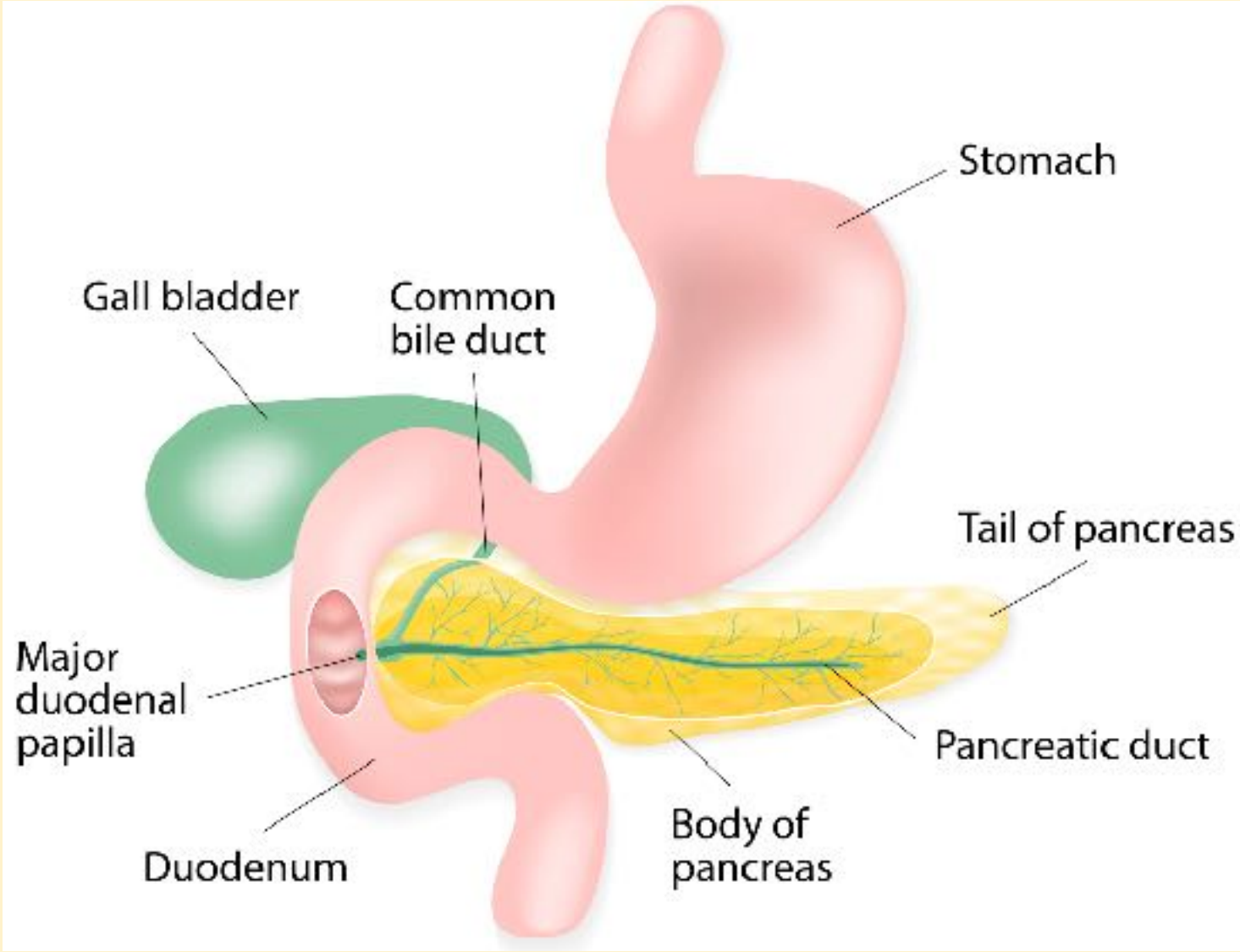
Dr. John Bergman

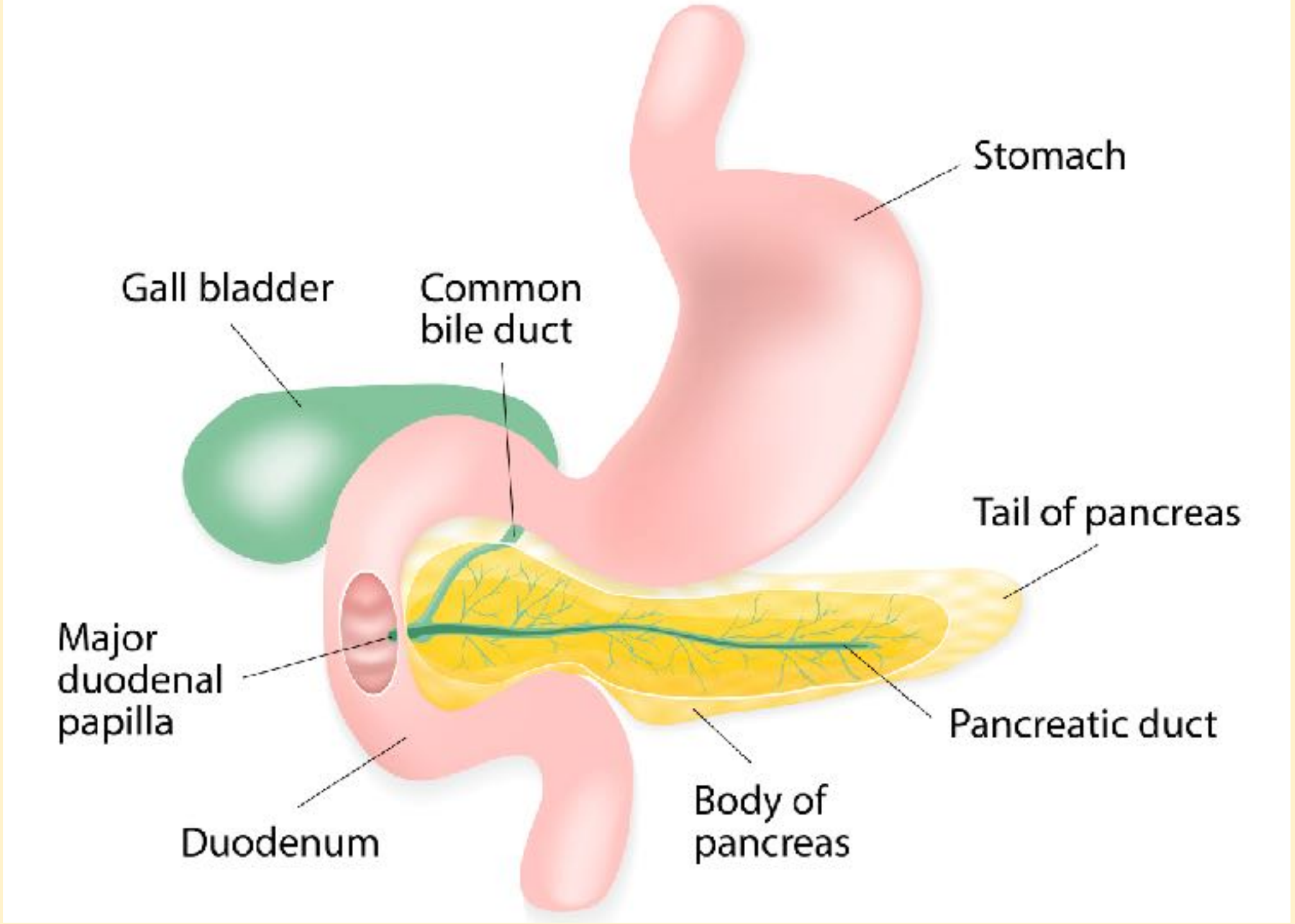
DIGESTIVE SYSTEM

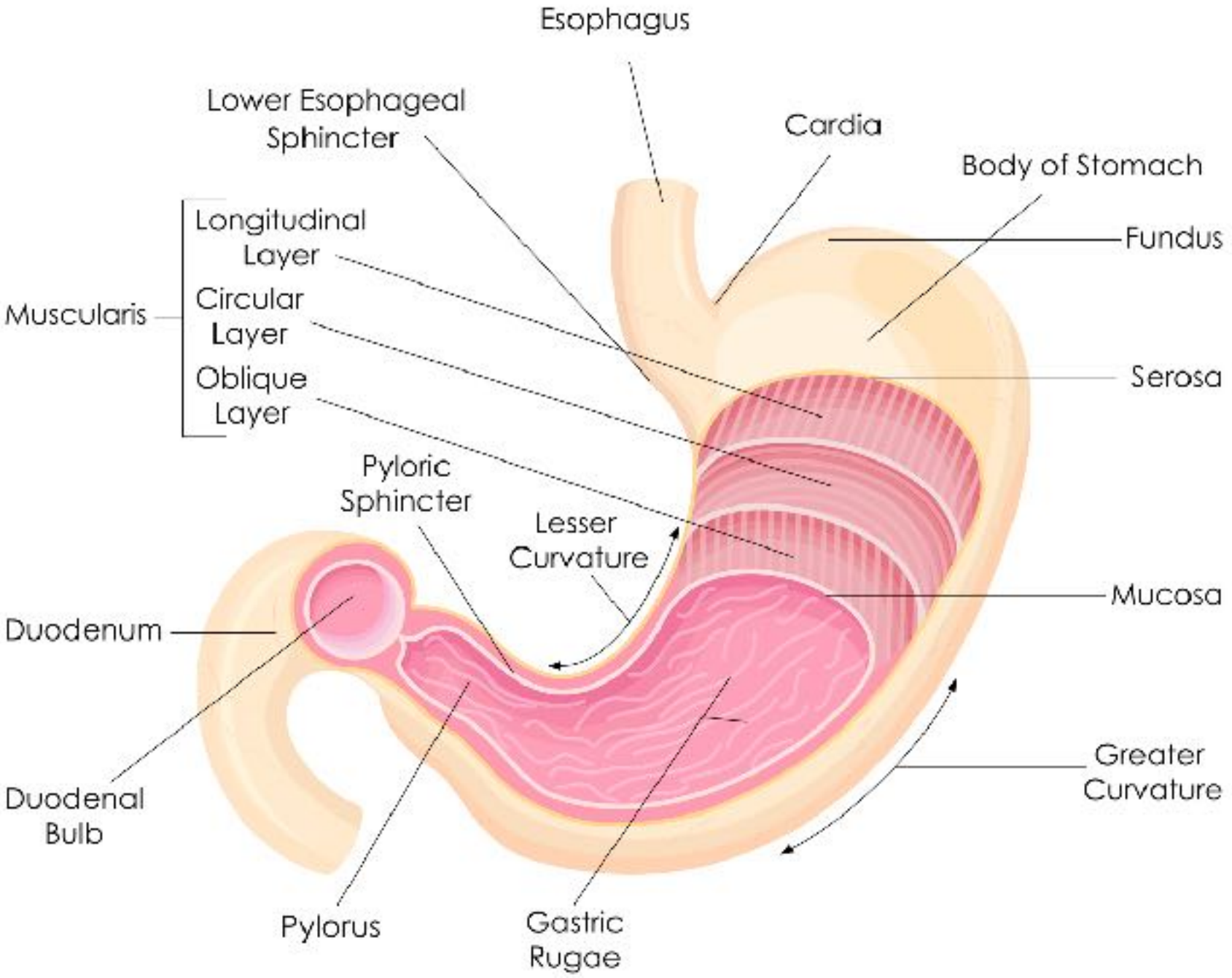


Anatomy of the Digestive System

- **Esophagus:** food enters the mouth passes through sphincters in the esophagus
- **Stomach**: Food enters stomach through the lower esophageal sphincter
- **Small Intestine:** Food exits the stomach through the pyloric sphincter.

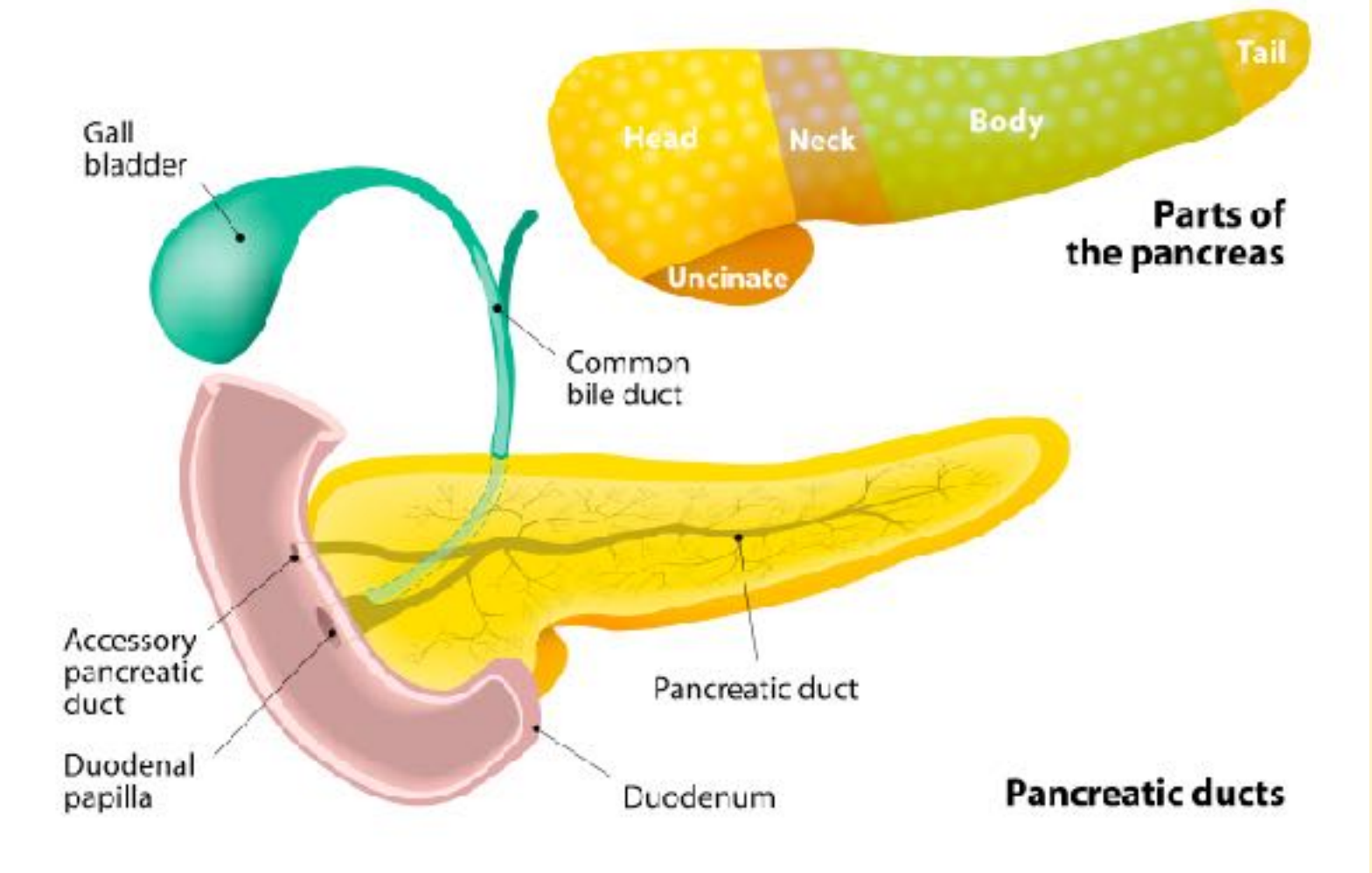



Stomach
Gall bladder
Common bile duct
Tail of pancreas
Major duodenal papilla
Pancreatic duct
Duodenum
Body of pancreas


Esophagus
Lower Esophageal Sphincter
Cardia
Body of Stomach
Fundus
Longitudinal Layer
Circular Layer
Oblique Layer
Muscularis
Serosa
Pyloric Sphincter
Lesser Curvature
Mucosa
Duodenum
Greater Curvature
Duodenal Bulb
Pylorus
Gastric Rugae

Small Intestine

The pancreas secretes **enzymes** to breakdown food in the duodenum. The gallbladder secretes **bile** into the duodenum to breakdown (emulsify) fats.

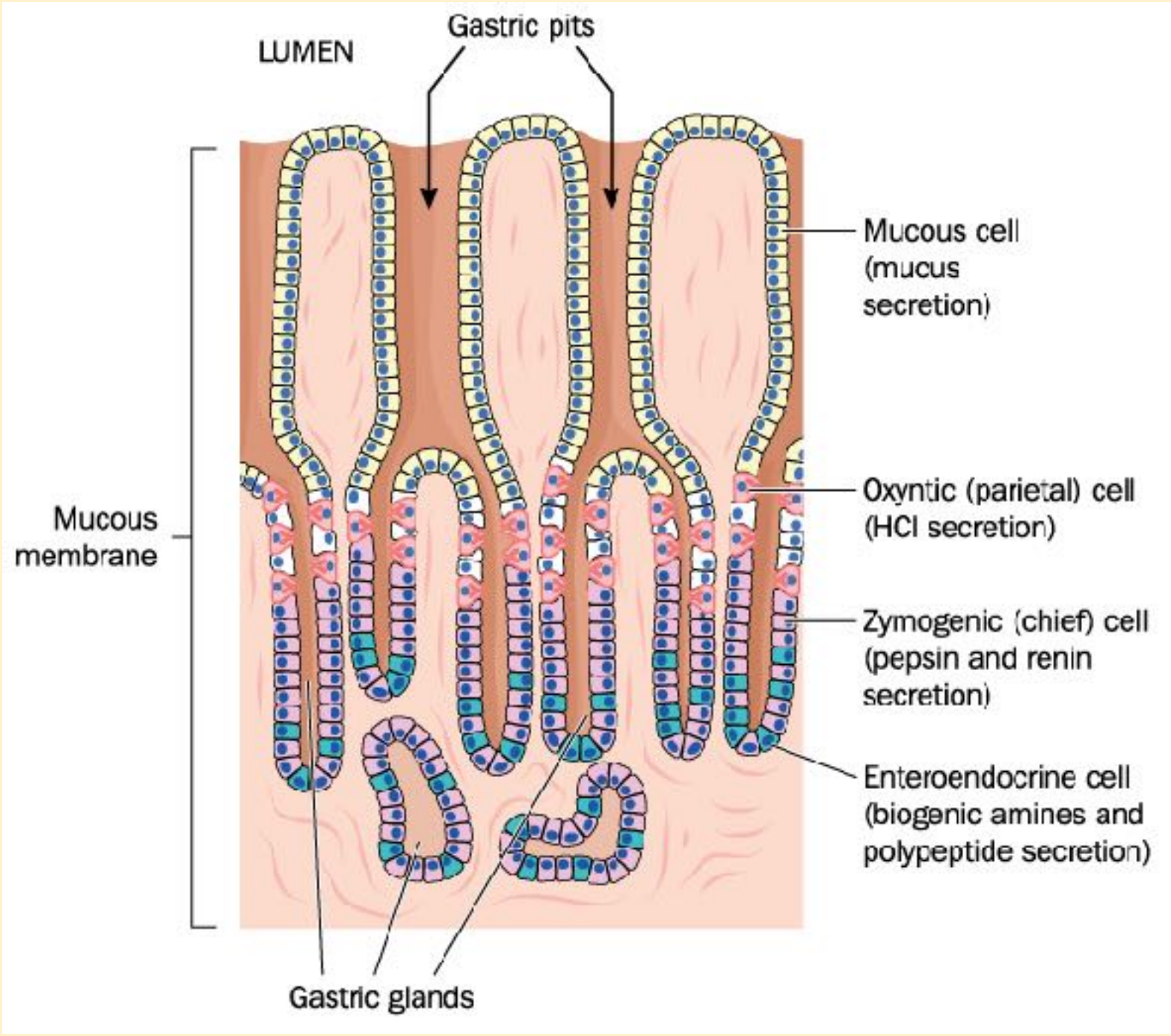


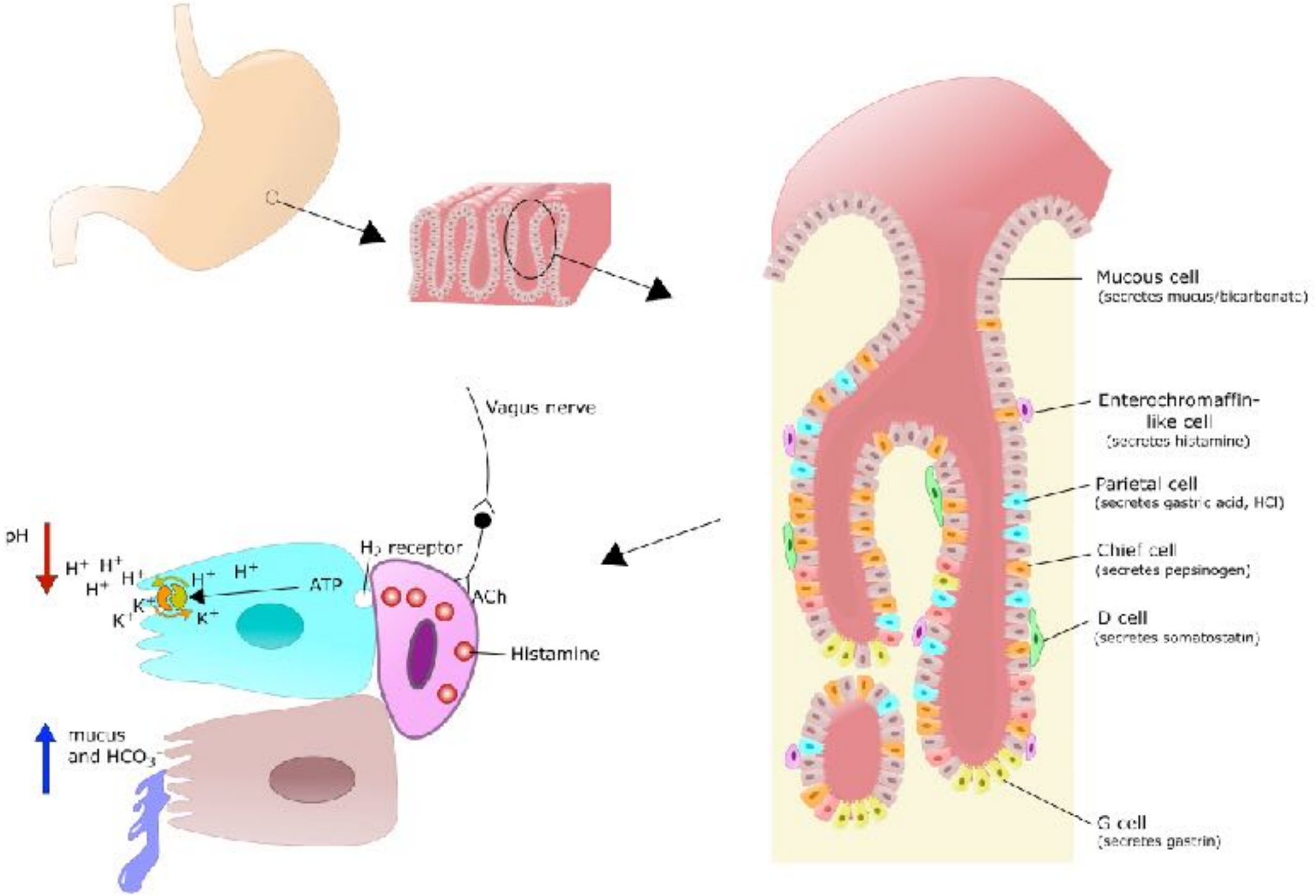
Stomach Cells

Chief Cells = pesin

Parietal Cells = HCL and intrinsic factor

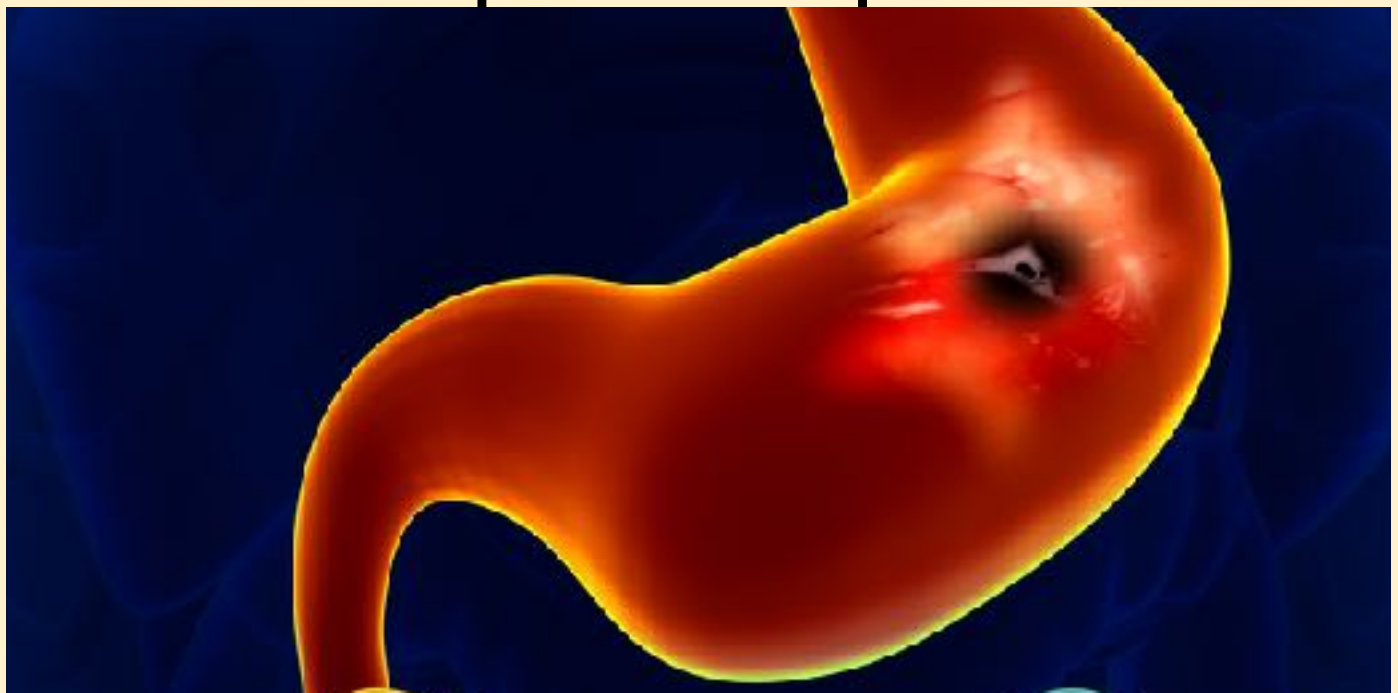
Goblet cells = mucus

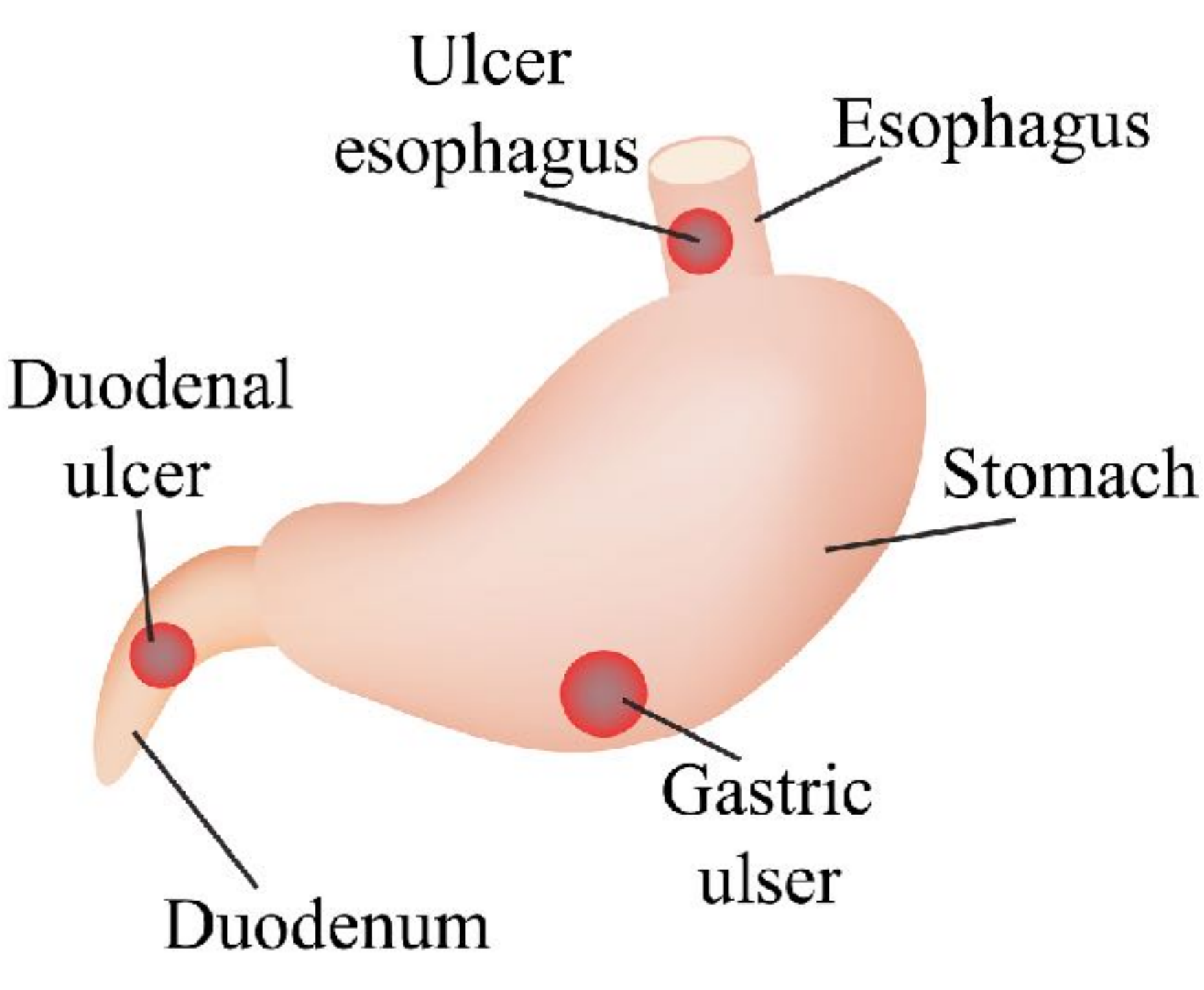



Vagus nerve
pH
H+ H+ H+
H+ H+
H+ H+
K+ K+
K+
ATP
H2 receptor
ACh
Histamine
mucus
and HCO3−
Mucous cell
(secretes mucus/bicarbonate)
Enterochromaffin-
like cell
(secretes histamine)
Parietal cell
(secretes gastric acid, HCl)
Chief cell
(secretes pepsinogen)
D cell
(secretes somatostatin)
G cell
(secretes gastrin)

Peptic Ulcers

- A painful sore or ulcer that develops on the lining of the esophagus, stomach, or small intestine.
- occur when acid in the digestive tract eats away at the inner surface of the organ
- The acid can create a painful open sore that may bleed.




Ulcer
esophagus
Esophagus
Duodenal
ulcer
Stomach
Gastric
ulser
Duodenum

Peptic Ulcer Disease

- Effects **6 million** people in the US each year

Stomach Cancer

- -Peptic Ulcers can lead to stomach Cancer which is the **5th most common cancer** in the world.

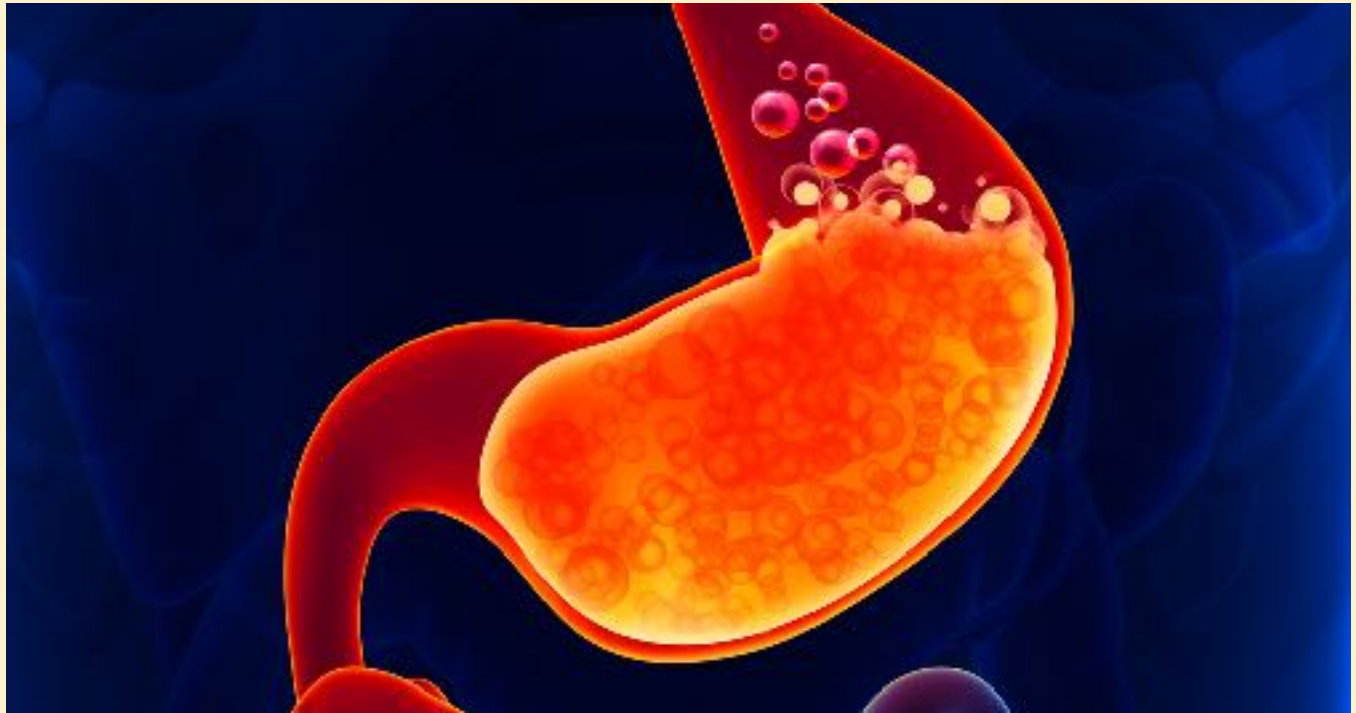
Peptic Ulcer Symptoms

- the most common symptom is **abdominal pain** (a burning pain)
- pain is caused by the ulcer and is aggravated by stomach acid coming in contact with the ulcerated area.
- vomiting of blood
- dark or tarry blood in stools
- Nausea or vomiting
- worse when your stomach is empty
- Flares of symptoms at night
- Disappear and then return for a few days or weeks

Cause of Peptic Ulcers

Increased acid vs. Decreased Mucus

- Your digestive tract is coated with a **mucous layer** that normally protects against acid.
- But if the amount of **acid is increased** or the amount of **mucus is decreased**, you could develop an ulcer.



Cause of Peptic Ulcer

- Helicobacter Pylori
- Regular use of Pain Relieve
- Other medications

Helicobacter Pylori

- live in the mucous layer that covers and protects tissues that line the stomach and small intestine.

- **H. pylori can be found in about half the world's population**.

”It's not clear how H. pylori spreads. It may be transmitted from person to person by close contact, such as kissing. People may also contract H. pylori through food and water.”

(American College of Gastroenterology)

Helicobacter Pylori

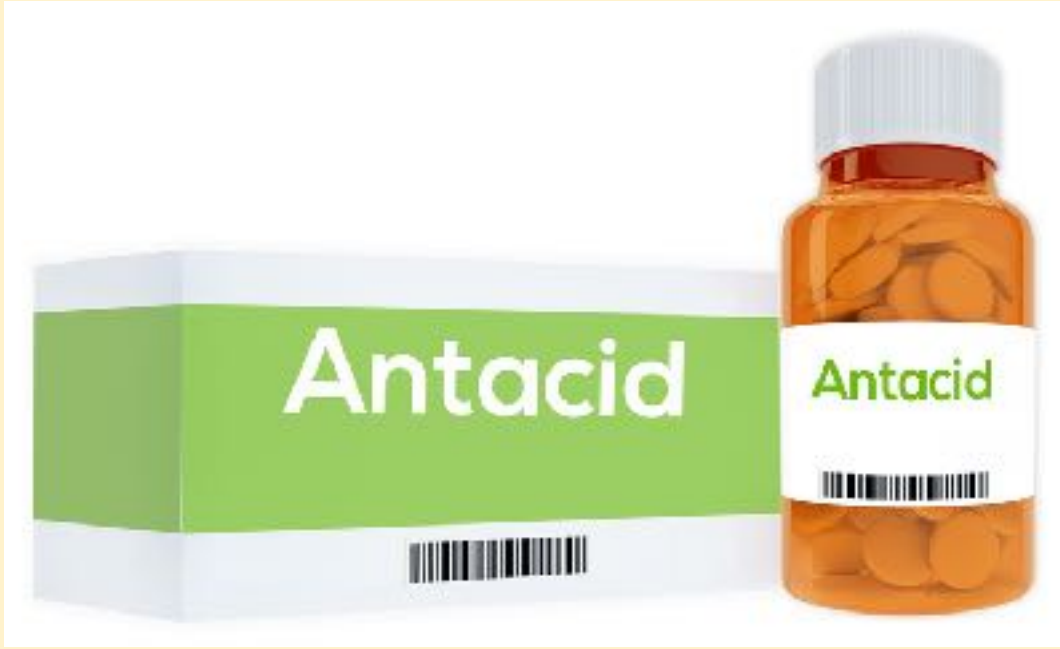
- Scientists still aren't sure why it affects some people and not others, and why some people never become infected at all

- Approximately **70%** of infected people are **asymptomatic**.

- Risk of infected people developing peptic ulcer disease during their lifetime is estimated at **10% to 15%.**
- Risk of developing gastric cancer is less than 3%.

Antacids and Peptic Ulcers

Proton pump inhibitors
and risk of gastric cancer:
a population-based cohort study.
(British Journal of Cancer)



- **PPI's Increase Adenocarcinoma's**
- Proton pump inhibitor (PPI) use leads to **hypergastrinaemia**
- gastric cancer incidence increased among PPI users with most prescriptions
- Antacids loosen the LES cause acid to flow up the esophagus

NSAIDs- Nonsteroidal Anti-inflammatory Drugs

- aspirin, ibuprofen (Advil, Motrin IB)
- naproxen (Aleve, Anaprox)
- Peptic ulcers are **more common in older adults** who take these pain medications frequently or in people who take these medications for osteoarthritis.

How NSAIDs Effect the Stomach

- block an enzyme called **cyclooxygenase 1, or COX-1.**

- This enzyme helps prevent ulcers by enhancing blood flow to the stomach and increasing the production of protective mucous.

- If there's a shortage of COX-1, your stomach may not develop its usual protective lining, making it more vulnerable to attack by stomach acid.

National Digestive Diseases Information Clearinghouse

"Normally the stomach has three defenses against digestive juices:

- **mucus** that coats the stomach lining and shields it from stomach acid,
- the chemical **bicarbonate** that neutralizes stomach acid, and
- **blood** circulation to the stomach lining that aids in cell renewal and repair,"

"**NSAIDs hinder all of these protective mechanisms**, and with the stomach's defenses down, digestive juices can damage the sensitive stomach lining and cause ulcers."

Causes of Peptic Ulcers?

- H. Pylori
- NSAIDs
- Medications

Contributing Factors

- Antibiotics
- Smoking/Alcohol
- Diet/Exercise
- **Could Vaccinations be a Cause of Peptic Ulcers?**

History of Peptic Ulcers

Medical Journal of Australia

- Their objective was to identify once and for all the cause of peptic ulcers by **analyzing all known causes** or contributing factors that cause the development of peptic ulcers

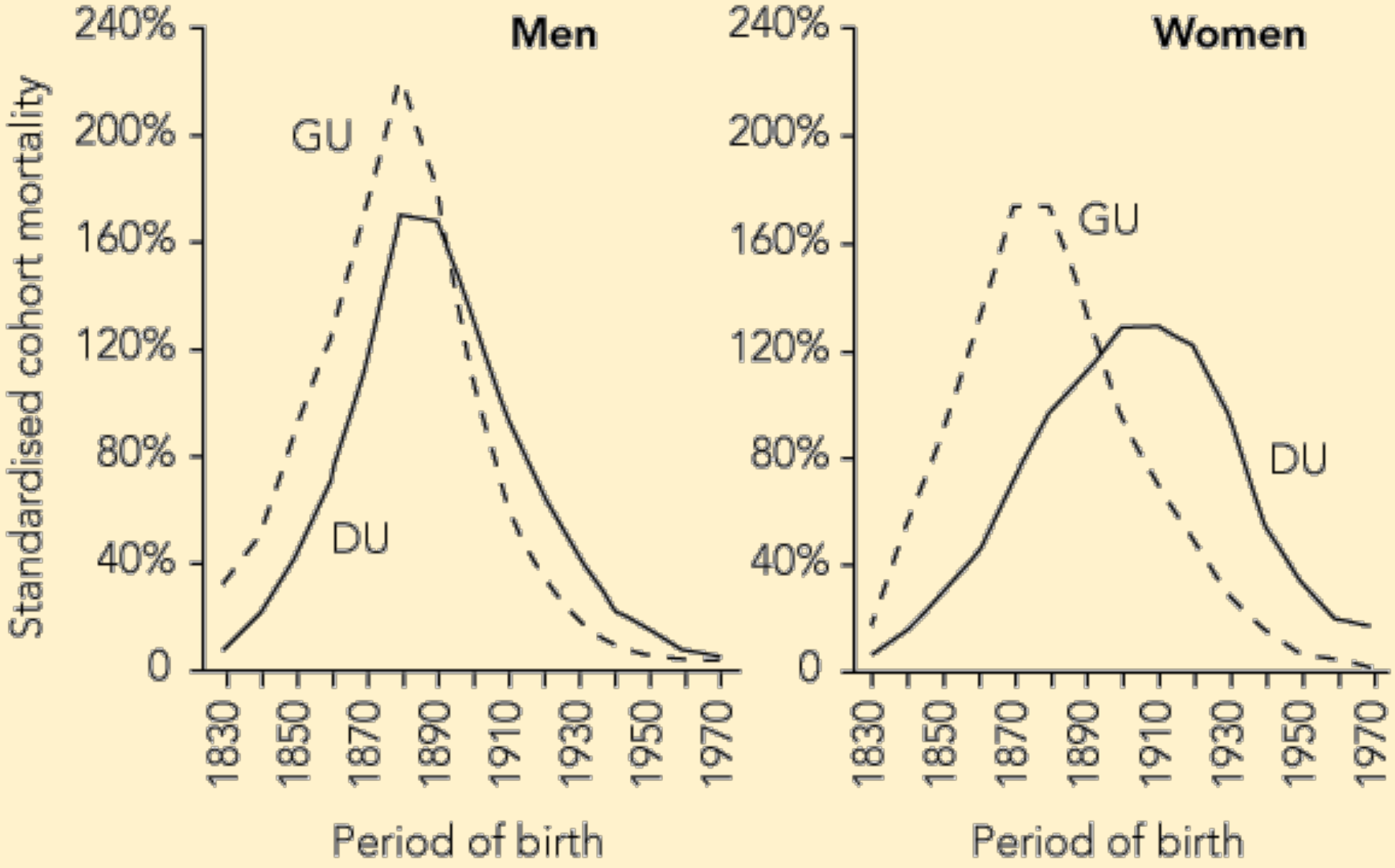
"In summary, Peptic ulcer will likely disappear from the list of important gastrointestinal disorders before we fully determine its cause."

(Medical Journal of Australia)

History of Peptic Ulcers

- an epidemic of PU began around the middle of the 19th century
- The risk of gastric ulcer (GU) was highest in people born around **1885**, while
- the risk of duodenal ulcer (DU) was highest in those born about **10-30** years later.

- *H. pylori* infection offers an **inadequate explanation** of the PU epidemic.
- PU declined in spite of an increased incidence of smoking.
- None of the other possible causes of ulcer (non-steroidal anti-inflammatory drugs, stress or diet) **satisfactorily explains** the epidemics of GU and DU

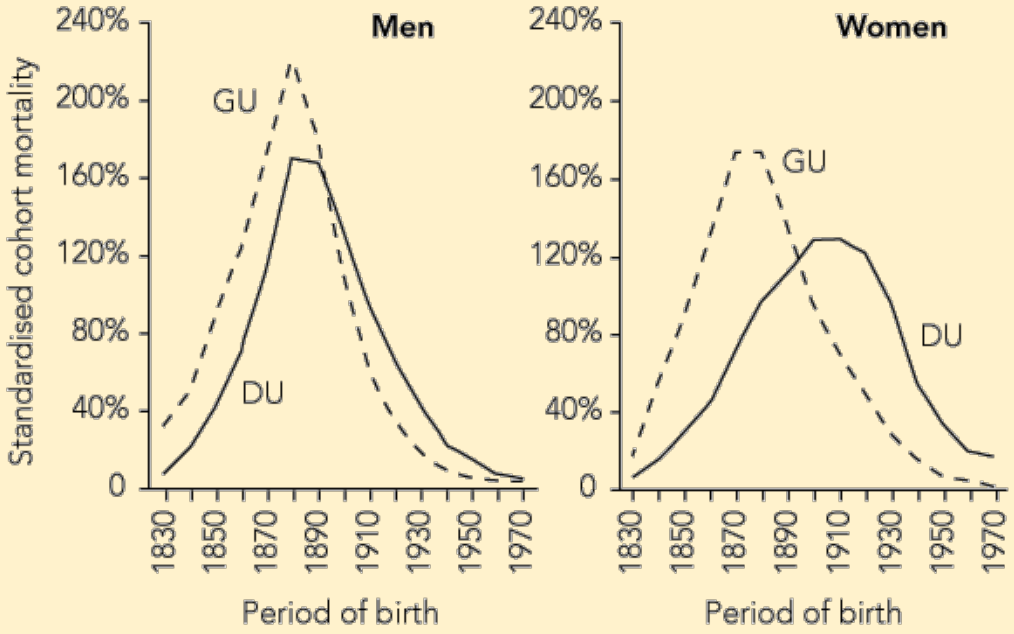


What could have caused Peptic Ulcers to rise between 1830-1970

Connection Between the Smallpox Vaccine and Peptic Ulcers

The Timeline of Peptic Ulcers

- 1830- Beginning of massive rise in Peptic Ulcers
- 1870 to 1910- Peak of Peptic ulcer Epidemic
- 1910 to 1970- a steady decline in Peptic Ulcers



The Timeline of Vaccines

- Smallpox Vaccine developed by Edward Jenner in **1796**
- By **1840** Mandatory vaccine programs were implemented in Europe
- Compulsory infant vaccination was introduced in England by the **1853** Vaccination Act.
- By **1871**, parents could be fined for non-compliance, and then imprisoned for non-payment.
- **1907** Act effectively marked the end of compulsory infant vaccination in England.
- In the US, first to impose compulsory vaccination being Massachusetts in 1909.
- By **1930**, Compulsory infant vaccination was regulated by only allowing access to school for those who had been vaccinated.
- **1900**- A survey of vaccines, found wide variations in bacterial contamination.
- Establishment contained 5,000 bacteria per gram, while commercial vaccines contained up to 100,000 per gram
- late 1940s and early 1950s- new methods of vaccine manufacturing lead to decreased bacterial contamination
- 1972- Last case of smallpox

Bacterial Flora and Viral Flora

Bacteria

- **80 percent** of your immune system resides in your gastrointestinal tract
- 100 trillion bacteria—about *two to three pounds* worth of bacteria
- You should have about 85 percent "good" bacteria and 15 percent “bad."
- Beneficial bacteria keep the bad bacteria and yeasts in check
- produce nutrients your body needs, such as B vitamins.

Viruses

- Bacteriophages: beneficial viruses in your body
- Roughly 4 Quadrillion viruses in your body

Disruption of Your Microflora

- Antibiotics
- Vaccinations
- Medications
- Processed Foods

Antibiotics

Confined animal feeding operations (CAFO's)

- American factory farms used ***29 million pounds*** of antibiotics in 2009 alone
- Estimated non-therapeutic use of antibiotics in livestock accounted for **70 percent** of the total antibiotic use in the US (FDA)

"Clinical levels of antibiotics can cause oxidative stress that can lead to damage to DNA, proteins and lipids in human cells"

James Collins, Ph.D. Wyss Institute, Harvard University

Effects of Antibiotics

- Kill both beneficial and pathologic bacteria
- Upset the delicate balance of your intestinal terrain

- Yeasts are opportunistic organisms and will take over = **Dysbiosis**
- Yeast use their hyphae (tendrils) to literally poke holes through the lining of your intestinal wall = **Leaky Gut**

Dangers of Glyphosate

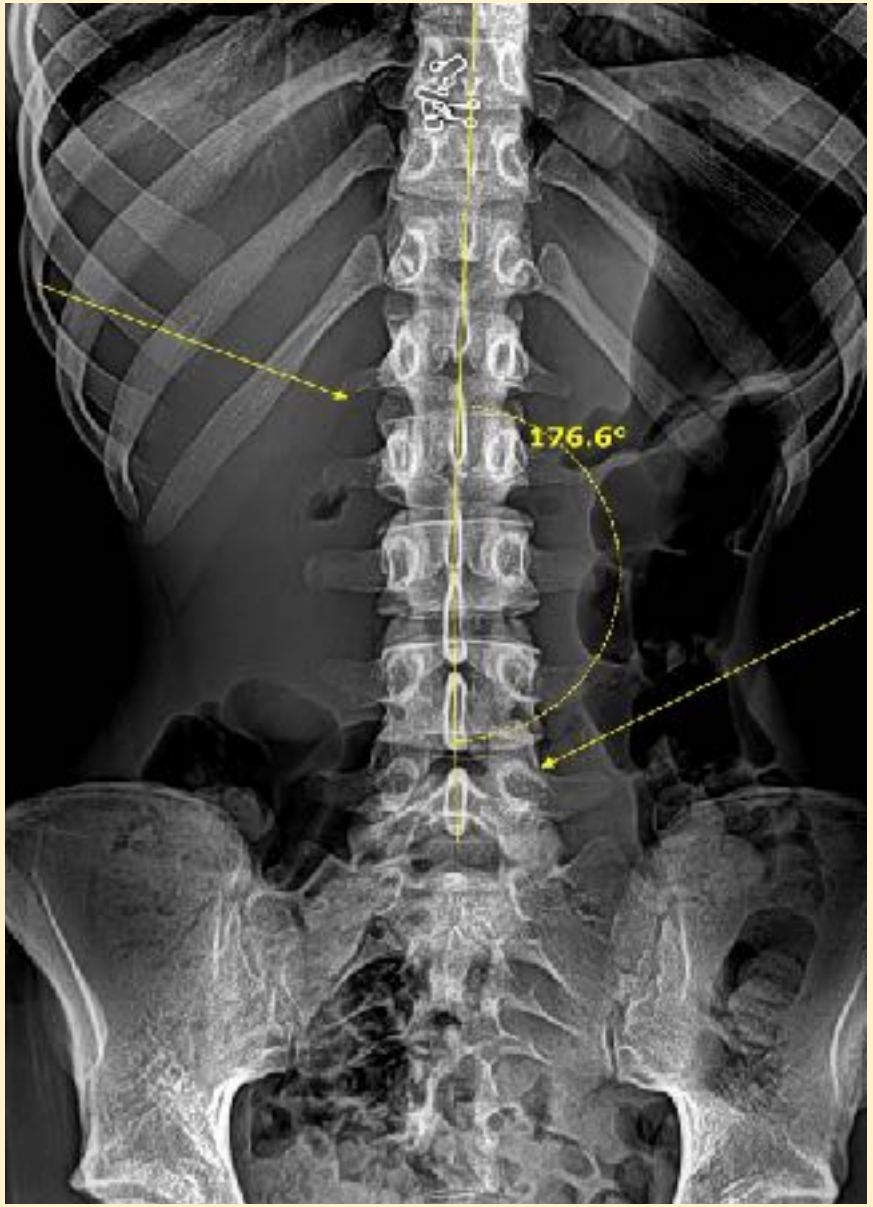
Glyphosate is a very powerful **selective antibiotic** that kills beneficial, but not pathogenic, microorganisms in the soil and intestine.

Residue levels permitted in food are **40 to 800 times** the antibiotic threshold and concentrations shown in clinical studies to damage mammalian tissues.

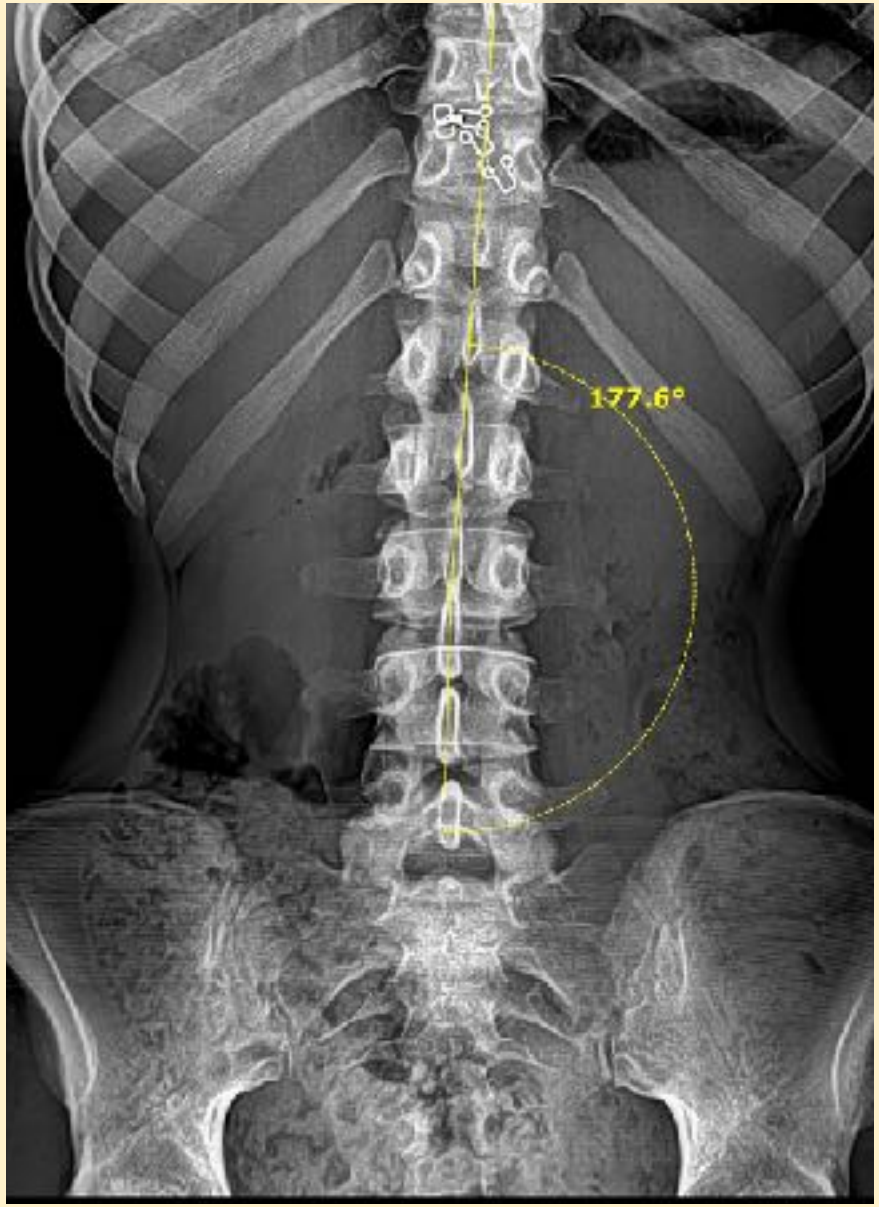
Multiple Vaccinations

Effecting the Gut Function

Abnormal Before

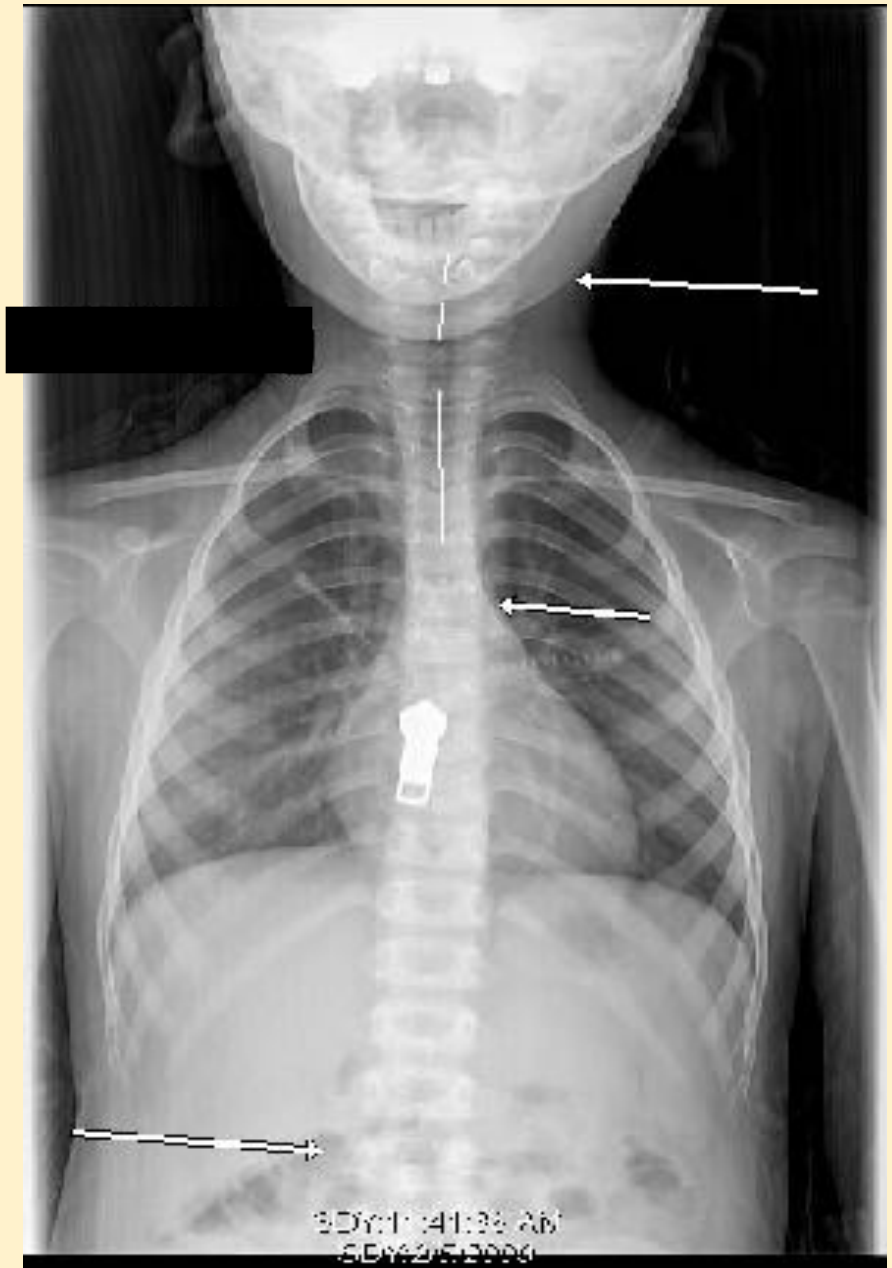


Normal After



Multiple antibiotics affecting gut

Normal



Abnormal

Artificial Sweeteners

Splenda (Sucralose)

- is a Chlorinated artificial sweetener
- Increases the pH level in your intestines, and
- Reduces the amount of good bacteria in your intestines by 50%

Sucralose has a potent inhibitory effect on your gut bacteria and inactivates digestive protease. It also alters gut barrier function.

Journal of Toxicology

Maintaining the Health of Your Gut

- Healthy nerve supply
- If your taking Drugs Fix the problem
- Healthy saturated fats
- Vit D-3 3000IU's per 100 lbs
- Lugol's Iodine (Ancientpurities.com)
- Plant based mineral supplement
- Vitamin C with bioflavinoids Omega 3's
- Probiotics
- Organic Plant Based Diet
- Reducing and eliminating grains

The Solution

- Juicing vegetables and blending fruits break down the fibers and predigests the veggies which helps your body absorb more nutrients and makes the digestive process easier.
- spices like Cayenne pepper in your dishes which is fantastic for healing ulcers and will also decrease your pain. You can cook with Cayenne pepper or mix it in a glass of water twice a day (morning and evening).
- Other remedies are also very beneficial for the healing process and pain relief such as colloidal silver, raw honey, garlic, plums, raw goats milk, barely, aloe juice, and licorice root.
- Deglycyrrhizinated licorice (DGL) is a natural treatment for ulcers and has been used with great success to treat gastric and duodenal ulcers. Licorice treats the cause of the ulcers and promotes healing of the digestive tissues
- Studies have shown that cabbage juice has remarkable healing powers for ulcers. Drink a quart of cabbage juice daily. It may be diluted with water or carrot juice.
- Cultured products will provide the friendly "bacteria" that fight H. pylori. Drink kefir milk or eat some live cultured yogurt every day.
- Zinc is healing to the digestive tract. Good sources include pumpkin seeds and whole grains.
- Consume garlic with your meals; test tube studies show it has anti-Helicobacter pylori properties.

The Solution

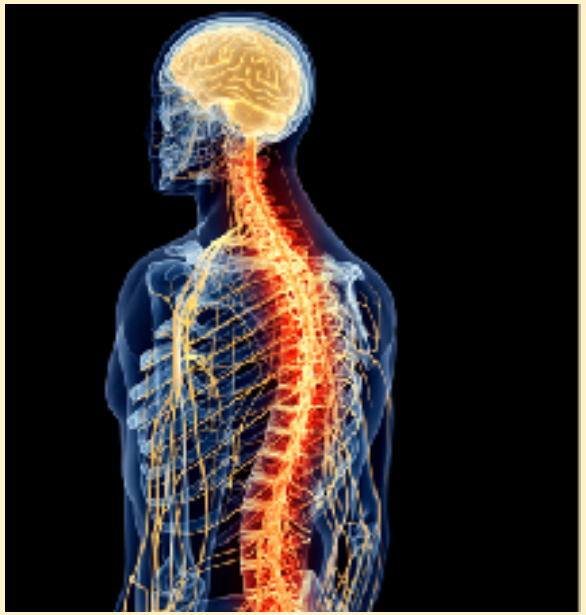
Natural Treatment of H. Pylori

- **lactoferrin**, an iron-binding protein found in bovine colostrum, can kill h. pylori bacterium. (It can also help protect you from becoming infected with h. pylori in the first place.)

Water

- In addition to these diet changes you'll need to increase your water intake to 50% of your body weight in ounces daily. So a 200lb person need 100 ounces of water daily
- avoid drinking water 30 minutes before, during and 30 minutes after a meal because this will dilute your stomach acid and cause additional issues with your digestive system.

The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

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