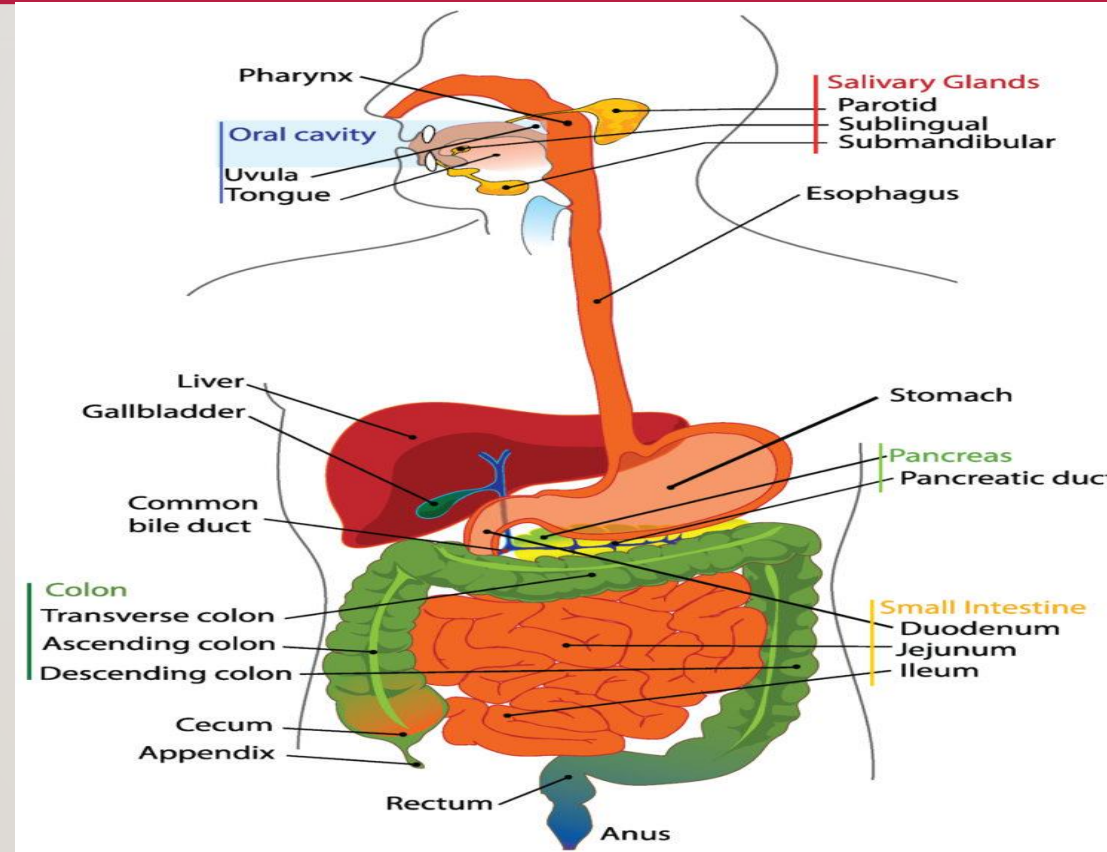


YOU, ME, AND THAT NAGGING FEELING IN YOUR GUT!



LET'S DO A LITTLE REVIEW OF THE GI SYSTEM



DIGESTION AND ABSORPTION

- The GI system is primarily known for its role in digestion. Two forms of digestion occur in the GI system, one is by mechanical influences and the other is chemical influences. So breakdown and absorption occur due to mechanical breakdown and movement, and the chemical breakdown of food for easier absorption.
- Other influences include the gut and GI system microbiome. The brain, nervous system, circulatory system, hormones and enzymes, play a major part in digestion, absorption, and transport of nutrients to all areas of the body. Everything we eat and drink is directly acted on by the digestive system.

DIGESTION: WHAT COULD POSSIBLY GO WRONG?

- Conditions of GI system that lead to illness or disease include the following (but not a complete list), which we'll briefly cover in the following slides:
- GERD or Gastroesophageal Reflux Disease
- IBS or Irritable Bowel Syndrome
- Gastroenteritis
- Diverticulosis

GERD OR GASTROESOPHAGEAL REFLUX DISEASE, A.K.A. HEARTBURN

This is the regurgitation of stomach and sometimes duodenal contents back up the esophagus.

May include a small amount of vomitus all the way up the throat. These contents are extremely caustic/erosive due to the acid content.



ETIOLOGY

- First indication is that the patient will feel as if he is having chest pain associated with Angina. Or perhaps the patient will have sputum tinged with a little blood.
- GERD can stem from overeating, pregnancy, or even weight gain.
- GERD associated with some kind of pathology is usually due to an abnormal relaxation of the cardiac sphincter, or lower esophageal sphincter. There may be an increase in intra-abdominal pressure that may be the root cause.
- Patients with a hiatal hernia (part of the stomach pushes up through the opening in the diaphragm) can have more frequent problems with GERD.

CAN MEDICATIONS OR FOOD CAUSE GERD?

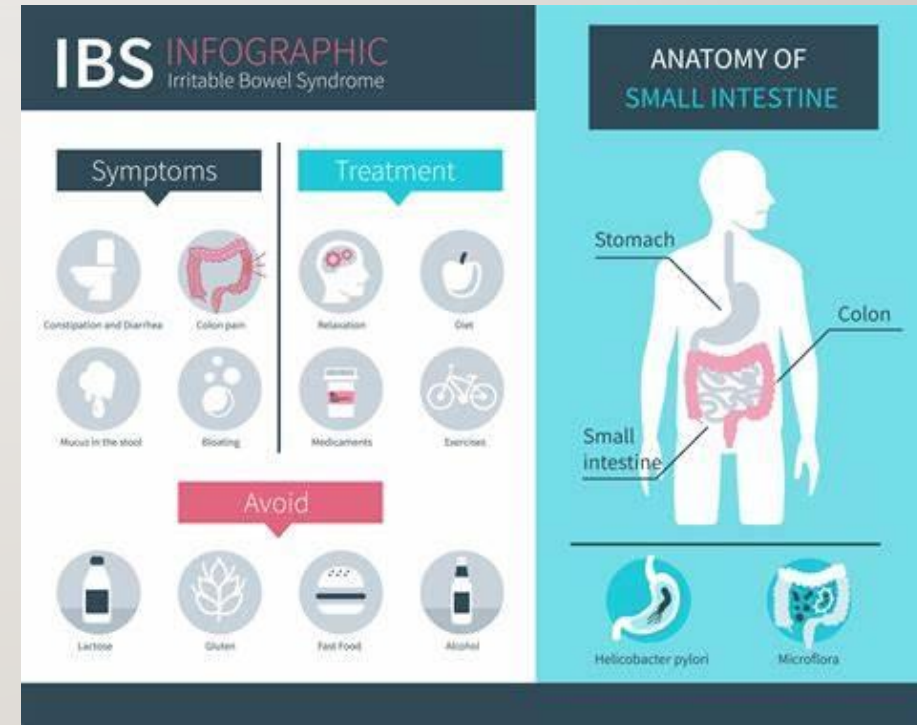
- Some medications can cause or exacerbate GERD, including Calcium Channel blockers(anti-arrhythmic), like Cardizem.
- Alendronate (for osteoporosis) is another drug that can lead to GERD.
- Theophylline (bronchodilator) is another drug suspected to cause GERD.
- Demerol (Opioid pain reliever) can also exacerbate GERD.
- Foods like Coffee, and alcohol can irritate conditions associated with GERD.
- Any drug that relaxes the lower esophageal sphincter can aggravate GERD.

TREATMENT AND PREVENTION

- **Usually an EGD is the diagnostic** method of choice to confirm GERD.
- Barium swallow is another method of detecting gross changes and strictures.
- Monitoring of esophageal pH
- **Treatment:** Elevate the HOB, change pm meal to a light dinner, no eating 3-4 hours prior to bedtime.
- **Other treatments:** Antacids(Tums), H2 receptor blockers(Pepcid), proton pump inhibitors(Prilosec). ALERT: B Vitamins
- **Prognosis:** Failure to respond to non drug and drug tx can lead to further complications. Surgical options.
- **Teaching:** S/S awareness, watch for trouble swallowing, and breathing, usually late symptoms.

IBS OR IRRITABLE BOWEL SYNDROME

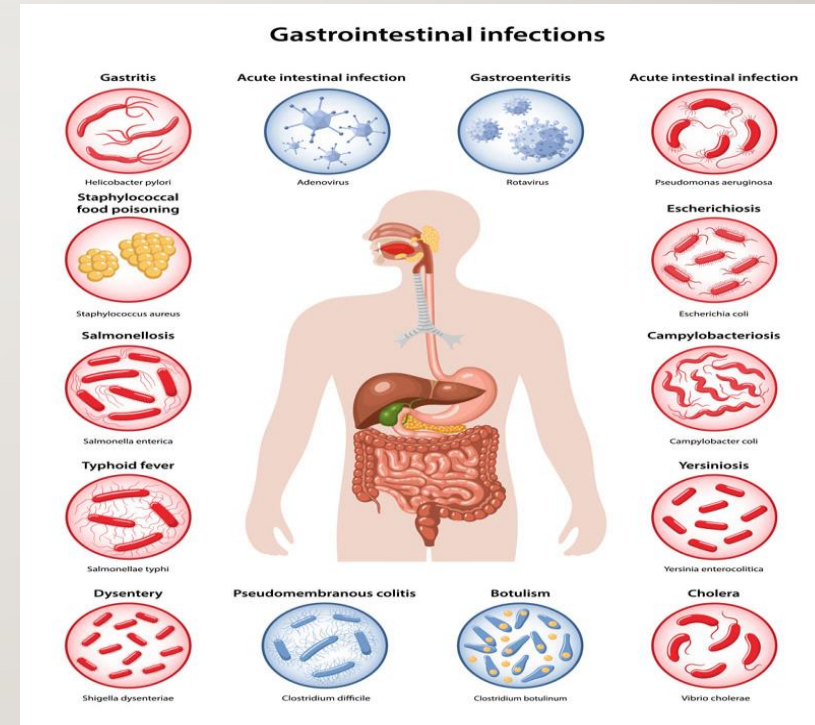
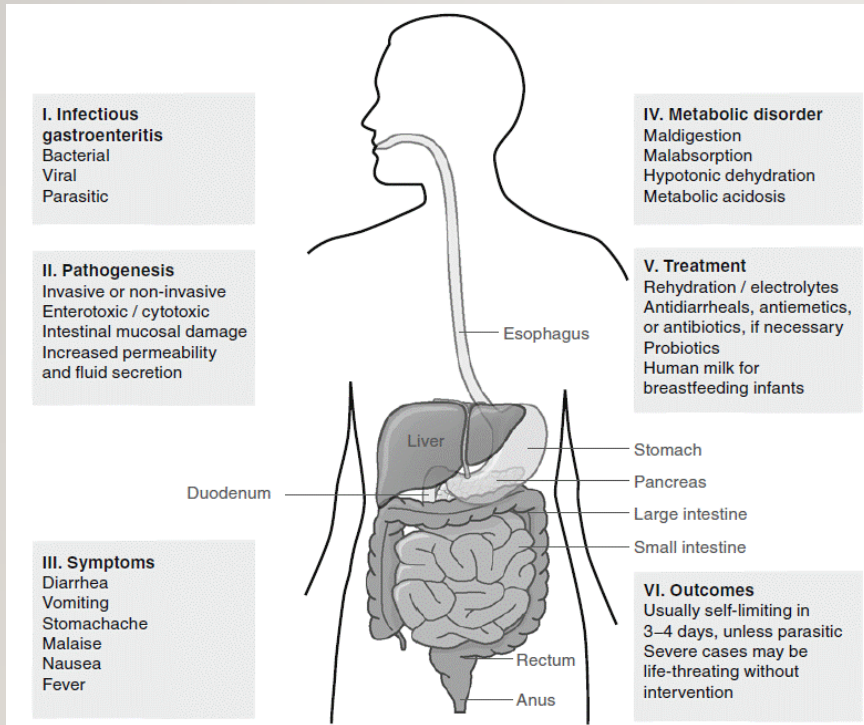
- **IBS**: A set of signs and symptoms including bloating, cramping, diarrhea, constipation, gas, and nausea, and changes in bowel habits. This is a long term condition that can be managed, but no known cure.
- **Causes**: Intestinal spasm, stress, nervous system abnormalities to the gut and intestines, changes in gut microbiome, medications and foods can exacerbate the existing condition.



IBS: CONTINUED

- **Triggers:** Certain foods or beverages. For example, dairy products, some citrus fruits, and certain legumes and cabbages, have been known to trigger an episode.
- **Risk factors** include being younger, female, stress and anxiety, and a family history of IBS or related syndromes.
- **Complications:** Poor absorption of nutrients, possible inflammation and bleeding in the lower intestines, and if new, can lead to depression and anxiety disorder.
- **When to call the doc:** notice rectal bleeding, loss of weight, s/s of anemia, other unexplained digestive symptoms.

GASTROENTERITIS



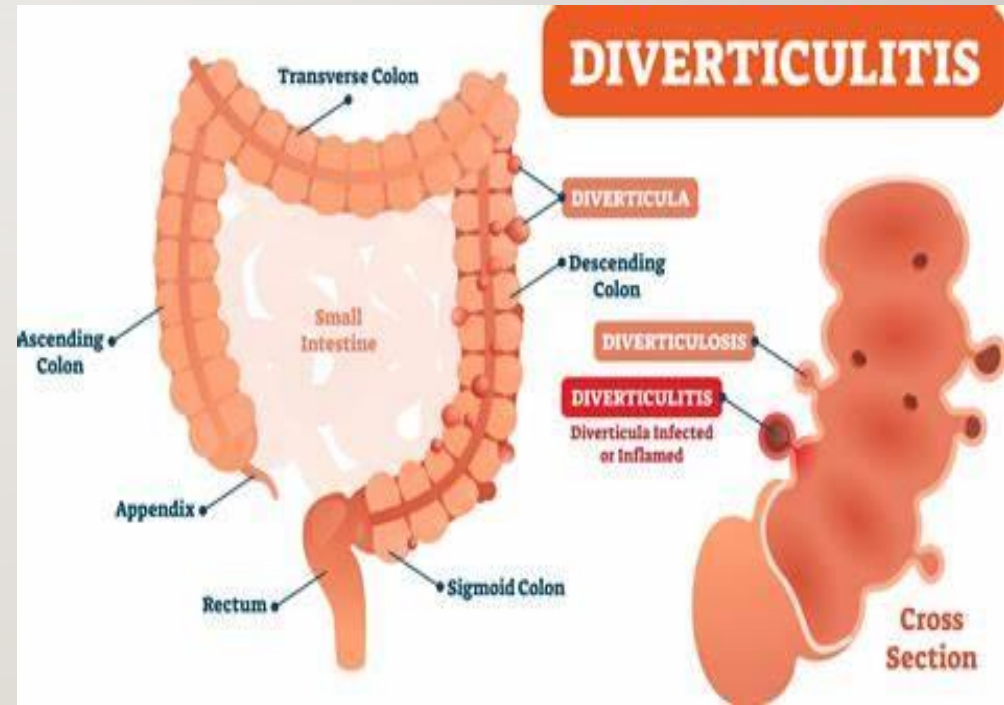
GASTRO-ENTER-ITIS

STOMACH-INTESTINE-INFLAMMATION

- **The Good news** is that this is a self limiting disorder or condition.
- **Usual culprit is a pathogen**, a bacterium or a parasite.
- **S/S**: nausea/vomiting, diarrhea(maybe travelers diarrhea), fever, fatigue, dehydration.
- **Tests**: Blood work: CBC, Chemistry panel, and stool for blood and stool for parasites.
- **Disorders associated**: Dehydration, malabsorption, indigestion, and acidosis(metabolic).
- **Treatments** include rehydration efforts, antibiotics (usually IV), concentrated electrolytes, antiemetics, and introduction of probiotics.
- **Outcomes**: recovery and usually self limiting. Sever cases may need further investigation and hospitalization.

DIVERTICULOSIS (SMALL POUCHES DEVELOP IN THE COLON)

- Not well known why diverticulosis develops in the first place. Common theory is that the pouches develop due to **increased pressure in the colon.**
- Inflammation from gut contents collects in these pouches with risk of infection.
- **This can then lead to diverticulitis.**
- What we know is that people who develop this disorder are not getting enough fiber in their diet.



WHY DOES THIS OCCUR AND WHAT CAN BE DONE ABOUT IT?

- **The good news** is that diverticulosis is usually not associated with bowel cancer.
- **The bad news** is that diverticulosis can lead to the more serious condition called diverticulitis.
- **S/S:** nausea and vomiting, cramping, tenderness over the gut, and constipation.
- **Best treatments?** Likely, depending on severity, antibiotics (Flagyl or Cipro). Though in mild cases antibiotics is not needed. **Liquid diet a few days to give the bowels a rest.** Then progress from liquid to solid depending on s/s.
- **Avoid** nuts, seeds and popcorn for a while! When a flare up occurs a low fiber diet is suggested.

QUESTIONS? CONCERNS? TROUBLES?

- Diet appears to be a major matter in all of these conditions, including gastroenteritis.
- Knowing what to avoid to prevent a flare up of these conditions is key.
- The gut microbiome is affected by antibiotic use, or rather overuse.
- Our own nutritional status is dependent on a well functioning digestive system.
- Water also appears to be a factor to avoiding certain bowel conditions that lead to constipation.
- Don't ignore the s/s of these and other GI conditions. Ignorance can lead to big trouble!