

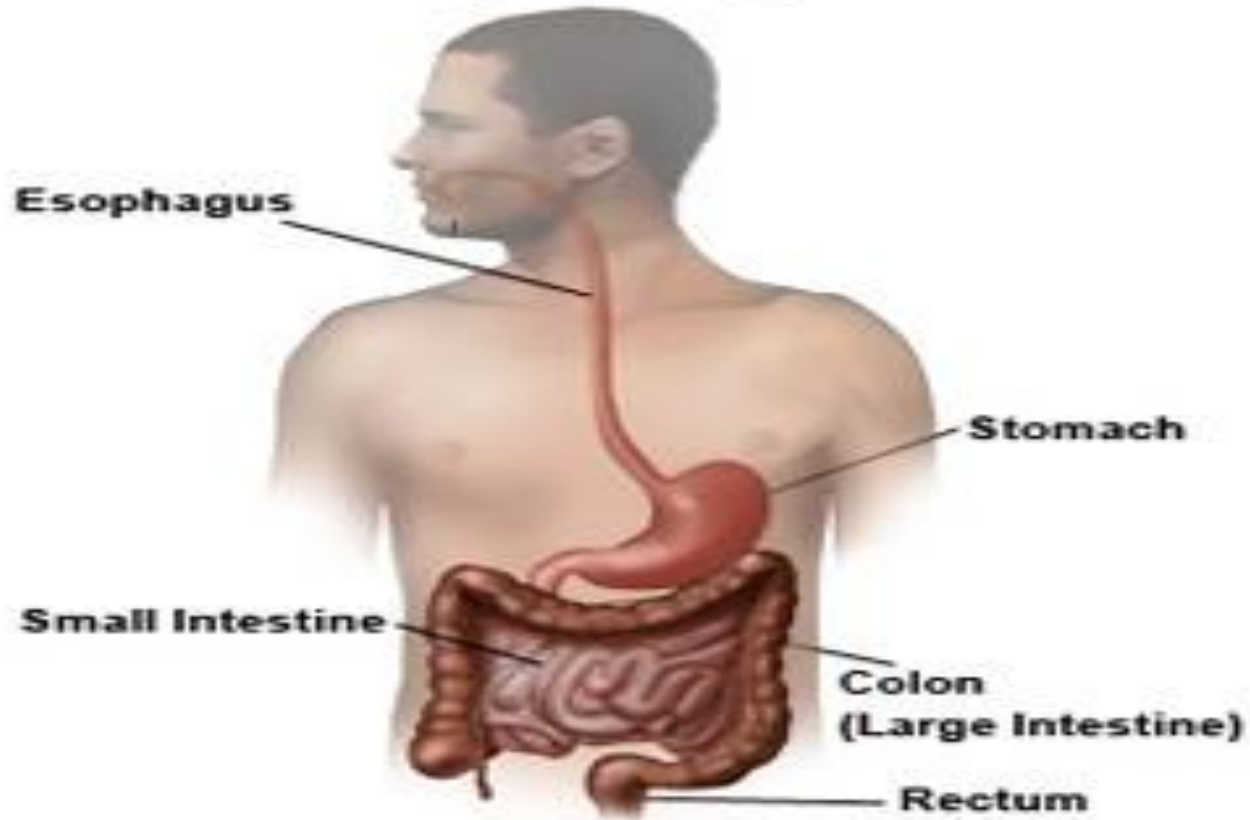
My Tummy Hurts..... (and other gastrointestinal complaints)



MPHA
MARYLAND PHARMACISTS ASSOCIATION

Gastrointestinal System

The Digestive System



Gastrointestinal System

- Common complaints include:
 - Nausea
 - Diarrhea
 - Heartburn / Indigestion
 - Constipation

Nausea

- Many causes, including:
 - Dietary indiscretions
 - Eating foods that are likely to bring on stomach upset, eating too much
 - Viruses
 - Drug side effects
 - Vestibular disturbances (“motion sickness”)
 - Pregnancy (“morning sickness”)

Nausea – Treatments

- TREATMENTS:

- Antacids (*sodium bicarbonate, aluminum, magnesium*)

Effectively treat episodic nausea

Available in liquid or chewable tablet forms

Side Effects:

Aluminum products (Maalox®,
Mylanta®, Gaviscon®) → *Constipation*

Magnesium products (Milk of Magnesia®,
Rolaids®) → *Diarrhea*

Nausea – Treatments

- TREATMENTS, con't:
 - Antihistamines (Bonine®), Dramamine®, Benadryl®)

Used mainly for bouts of motion sickness

Initiate use prior to travel

Main side effects: dry mouth, dizziness, DROWSINESS

Cautious use in older patients

Avoid using with certain conditions:

- Benign prostatic hypertrophy (BPH)
- Glaucoma

Diarrhea

- WHAT IS IT?
 - Waste traveling too quickly through colon, not enough water reabsorbed by the body
 - Defined by World Health Organization as:
 - 3 or more loose or liquid stools per day, or more frequently than is normal for the individual
- NUMEROUS CAUSES, INCLUDING:
 - Infection
 - Medications
 - Food intolerance

Diarrhea

- TREATMENT OPTIONS

- Rehydration

- VERY IMPORTANT to replace lost water
- >6 glasses of water (8 oz.), small sips frequently
- Oral rehydration solutions (PediaLyte ®) can also be used, amount based on weight
- For adults, start with 50 mL/kg of body weight over 4-6 hours for mild dehydration, 100 mL/kg over 6 hours for more serious dehydration

- Medications

- Bismuth subsalicylate (Pepto Bismol® is only safe age 12+)
- Loperamide (Imodium® safe age 6+)

Diarrhea – Danger Signs

- SEEK MEDICAL ATTENTION IF:
 - *Diarrhea persists for more than 1 week
 - *Dehydration continues
 - Signs include: dark urine, small amount of urine, increasingly dry skin, irritability, confusion
 - *Bowel movements include blood

Heartburn

- Burning sensation in center of chest
- Sensation can radiate toward the neck and throat
- IMPORTANT:
 - If pain radiates down left arm, through shoulder, and is felt as a tightness with accompanying sweating and weakness, these are potential symptoms of a heart attack, NOT heartburn (**SEEK MEDICAL ATTENTION IMMEDIATELY!!!!**)

Heartburn

- Treatments
 - Lifestyle Modifications
 - Medications
 - Antacids
 - H₂ Antagonists
 - Proton Pump Inhibitors



Heartburn

- Lifestyle Alterations
 - Elevate head of bed
 - **Wedge** vs. Extra pillows
 - Avoid foods/drink that can lead to heartburn, including:
 - Caffeine, tomatoes, alcohol, spicy foods



Heartburn

- Antacids

- Calcium, Aluminum, Magnesium containing products
- Bismuth subsalicylate (Pepto-Bismol®)
- Fast, temporary relief

*Side effects: Constipation (calcium, aluminum),
Diarrhea (magnesium)

*No bismuth subsalicylate in children under 12 (Reye's syndrome risk)

*Do not use long-term (more than 2 weeks) without being evaluated by physician

Heartburn

- H₂ Antagonists

- Ranitidine (Zantac®)
- Cimetidine (Tagamet®)
- Famotidine (Pepcid®)

*Check with physician, potential drug interactions

*Take before meals

*Do not use long-term (more than 2 weeks) without being evaluated by physician

Heartburn

- Proton Pump Inhibitors (PPI)
 - **Omeprazole (Prilosec®)**
 - **Lansoprazole (Prevacid®)**
 - **Omeprazole / sodium bicarbonate (Zegerid®)**
 - Pantoprazole (Protonix®)
 - Rabeprazole (Aciphex®)
 - Esomeprazole (Nexium®)
 - Dexlansoprazole (Dexilant®)
- ***BOLD** are available over the counter
- *Use in age 18+
- *All-day relief, take in the morning
- *Do not use long-term (>14 days) without being evaluated by physician

Constipation

- 2.7 million physician office visits yearly
- Affects 12-19% of U.S. population!
- POTENTIAL CAUSES:
 - **Sedentary lifestyle**
 - Obstruction
 - Medications that treat:
 - Pain
 - Allergy
 - Sleep
 - Depression
 - High blood pressure

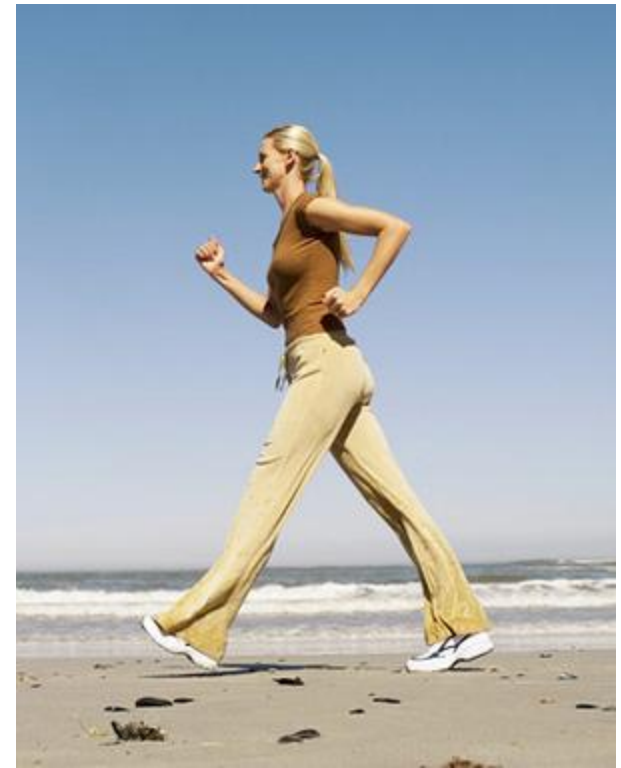


Constipation

- CRITERIA (Rome III Criteria) for chronic constipation
 - In the past 3 months, at least 2 of the following:
 - <3 bowel movements per week
 - Straining
 - Lumpy or hard stools
 - Sensation of obstruction
 - Sensation of incomplete defecation
 - “Manual maneuvering”

Constipation

- TREATMENTS:
 - Lifestyle modification
 - Medications



Constipation

- Lifestyle modifications
 - Diet
 - Recommended fiber intake of 20-35 grams/day
 - **SLOWLY** build up to recommended amount!
 - Food examples include: oatmeal, wheat bread, brown rice, wheat pasta, edible skins of fruits and vegetables
 - Hydration
 - Important for overall health
 - Physical Activity
 - Keeps everything *moving!*

Constipation

- MEDICATIONS
 - Bulk forming
 - Osmotic
 - Stool softeners
 - Stimulant laxatives
 - Lubricants, enemas, suppositories

Constipation

- Bulk forming
 - Psyllium (Metamucil®)
 - Methylcellulose (Citrucel®)
 - Polycarbophil (FiberCon®)
 - Wheat dextrin (Benefiber®)



- *Often first interventional medications
- *Usually poured into water to drink
- *Side effects can include gas, bloating

Constipation

- Osmotic

- Magnesium hydroxide (Milk of magnesia)
- Magnesium citrate
- Lactulose (RX only, can be prescribed for daily use)
- PEG solution (Miralax®)

*Work by bringing additional water into colon for easier transport

*Should be used occasionally

*Side effects can include gas, bloating, diarrhea if overdosed

Constipation

- Stool Softeners

- Docusate (Colace®)
- Mineral oil

*Work by allowing more water to enter stool

*Can be used occasionally

*Often prescribed with long-term pain treatments

*Side effects can include diarrhea, cramping

Constipation

- Stimulant Laxatives

- Senna (Senokot® , Ex-Lax®)
- Bisacodyl (Dulcolax®)

*Work by increasing activity in colon

*Can have serious side effects, should not be used long-term

*Increased effect if used with bulk-forming agents

*Side effects can include diarrhea, cramping, gas

Constipation

- Lubricants, Enemas

- Fleet® enemas (mineral oil, water)
- Glycerin suppositories

*Glycerin / mineral oil suppositories can be effective for children

* Can be useful, but not the most pleasant to use

Constipation

- What about other treatments?
 - If you continue to suffer from constipation, see your doctor
 - Prescription products are available for constipation that is not adequately treated by over the counter medications, or that is chronic



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