

### 1. Antacids

**MOA: Neutralize gastric acid, inhibit pepsin activity**

Sodium Bicarbonate

Calcium Carbonate – Hypercalcemia, Kidney stones, ↓ Drug absorption (chelation), rebound acid

Aluminum Hydroxide - Constipating

Magnesium Hydroxide – Diarrhea

SE: Alkalinization of the urine, ↓ drug absorption

### 2. Antihistamines – H<sub>2</sub> receptor Antagonists

**MOA: Inhibit parietal cell mediated acid production and release**

USE: Peptic ulcer, gastritis, esophageal reflux – Night-time reflux

Cimetidine – strong CYP inhibitor, Many DDI

SE: Antiandrogenic effects, gynecomastia, ↓ creatinine clearance, cross BBB – dizziness, confusion, prolactinemia

Ranitidine

SE: **Thrombocytopenia**, Decreased creatinine clearance

Famotidine

Nizatidine – no subject to first pass metabolism

### 3. Proton pump inhibitors

**MOA: Irreversible inhibit H<sup>+</sup>/K<sup>+</sup> ATPase in the parietal cells**

USE: Peptic ulcer, gastritis, esophageal reflux, Zollinger Ellison syndrome, H. Pylori combo therapy

Omeprazole – Prodrug

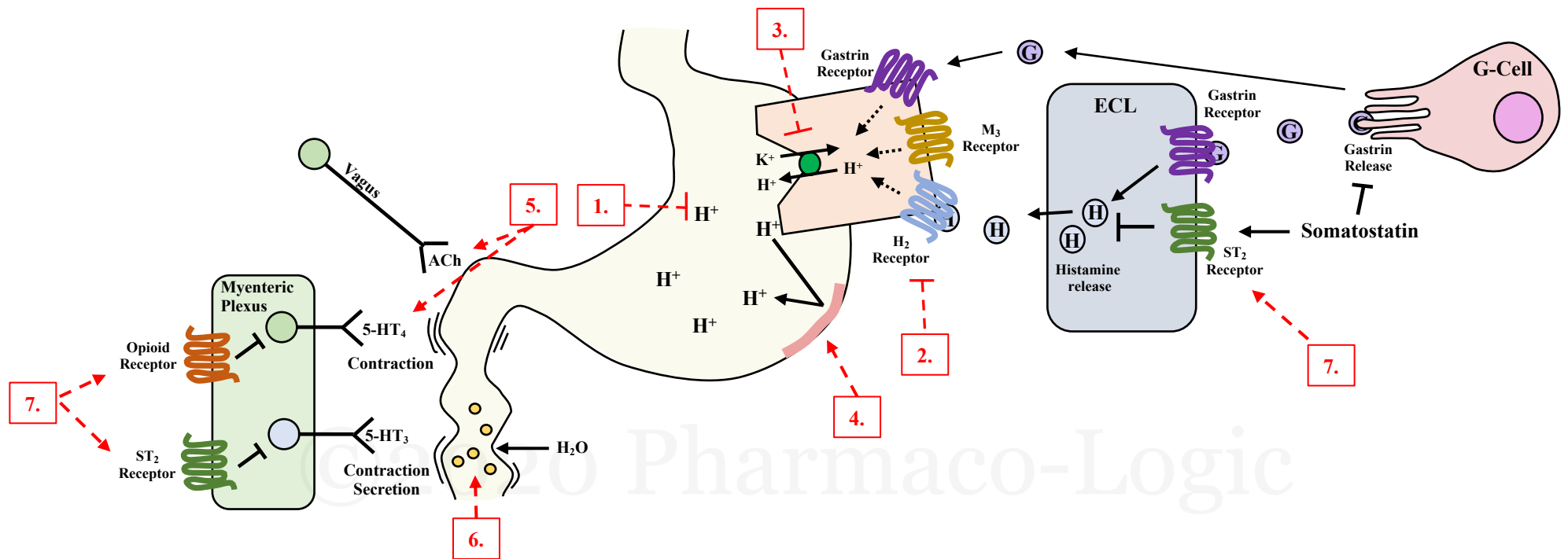
Esomeprazole – Prodrug

Pantoprazole – Prodrug

Lansoprazole – Prodrug

SE: Risk for C. Diff infection, pneumonia, Hypomagnesemia, hypocalcemia, reduced B12 absorption, ↑ gastrin/ECL production, Worsen Osteoporosis

DDI: Clopidogrel (CYP2C19 inhibition)



### 4. Mucosal Protectants

**MOA: Coats and enhance mucosa protection from acid**

Sucralfate – creates a protective coat – not absorbed

Misoprostil – PGE1 analog, ↓ cAMP → ↓ acidic production  
SE: Diarrhea CI: pregnancy (abortive)

Bismuth Subsalicylate – coats the GI tract – anti-inflammatory  
SE: Black tongue and stool, Constipation

### 5. Prokinetics

**MOA: Stimulate Enteric nervous system → GI motility**

Bethanechol – M<sub>3</sub> agonist

Neostigmine – AChE inhibitor

Metaclopramide – 5-HT<sub>4</sub> Agonist

SE: D<sub>2</sub> antagonist - neuroleptic syndrome, Parkinsonian, EPS

Domperidone – 5-HT<sub>4</sub> Agonist/D<sub>2</sub> antagonist

Cisapride - 5-HT<sub>4</sub> Agonist

### 6. Laxatives

**MOA: Stool softeners, increase GI fluid, Stimulate GI motility**

**Bulk Forming Laxatives** – Psyllium, Methylcellulose

SE: Bloating, gas, Cramping, constipation

**Surfactant/Lubricant Laxatives** – Mineral oil, Docusate

SE: Diarrhea (mineral oil), allergy (Docusate), gas, cramping

**Osmotic Laxatives** – Magnesium hydroxide, Lactulose – used for portal systemic encephalopathy → promotes NH<sub>4</sub><sup>+</sup> excretion

SE: Diarrhea, nausea, cramping, gas, dehydration

**Stimulant Laxatives** – bisacodyl, senna, castor oil,

SE: Cramping, incontinence, electrolyte imbalance

### 7. Anti-diarrheals

**MOA: Decrease GI stimulation**

Opioids – Loperamide (does not cross BBB), diphenoxylate, Eluxadolone

SE: Constipation – Diphenoxylate formulated with atropine

CI: Inflammatory diarrhea

Colloidal Bismuth – Coats GI tract

Kaolin – Clay substance, indigestible

Pectin – Gel forming polysaccharide, indigestible

Cholestyramine, cholestipol – decreased absorption of fat-soluble drugs

Octreotide – somatostatin analog – useful for GI tumors and AIDs

SE: Decreased GI, pancreatic, biliary secretions, Hypoglycemia,

cholelithiasis, Steatorrhea