



The Islamia University  
of Bahawalpur



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# Anti-Ulcer Agents

## (Generalized)

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# Anti-Ulcer Agents

- Anti-microbial agents
- Proton pump inhibitors
- Antacids
- Prostaglandins



# Anti-microbial agents

- › Amoxicillin
- › Bismuth compounds
- › Clarithromycin
- › Metronidazole
- › Tetracycline



- › Patients with peptic ulcer disease (duodenal or gastric ulcers) who are infected with *H. pylori* require antimicrobial treatment.
- › Successful eradication of *H. pylori* (80% to 90%) is possible with various combinations of antimicrobial drugs.



# Proton pump inhibitors

- › Omeprazole
- › Dexlansoprazole
- › Esomeprazole
- › Lansoprazole
- › Pantoprazole
- › Rabeprazole



- › The PPIs bind to the  $H^+/K^+-ATPase$  enzyme system (proton pump) and suppress the secretion of hydrogen ions into the gastric lumen.
- › They are the preferred drugs for stress ulcer treatment and prophylaxis and for the treatment of GERD, erosive esophagitis, active duodenal ulcer, and pathologic hyper secretory conditions
- › All of these agents are effective orally. For maximum effect, PPIs should be taken 30 to 60 minutes before breakfast or the largest meal of the day.



# Antacids

- › Aluminum hydroxide
- › Calcium carbonate
- › Magnesium hydroxide
- › Sodium bicarbonate



## Antacids

- › Antacids are weak bases that react with gastric acid to form water and a salt to diminish gastric acidity. Because pepsin (a proteolytic enzyme) is inactive at a pH greater than 4, antacids also reduce pepsin activity.
- › Antacids are used for symptomatic relief of peptic ulcer disease and GERD, and they may also promote healing of duodenal ulcers. They should be administered after meals for maximum effectiveness.



- › *Aluminum hydroxide* tends to cause constipation, whereas *magnesium hydroxide* tends to produce diarrhea. Preparations that combine these agents aid in normalizing bowel function.



## Prostaglandins

- › Prostaglandin E, produced by the gastric mucosa, inhibits secretion of acid and stimulates secretion of mucus and bicarbonate.
- › A deficiency of prostaglandins is thought to be involved in the pathogenesis of peptic ulcers. *Misoprostol* an analog of prostaglandin E<sub>1</sub>, is approved for the prevention of NSAID-induced gastric ulcers.
- › Dose-related diarrhea and nausea are the most common adverse effects and limit the use of this agent.



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