

GASTROINTESTINAL AGENTS

The gastrointestinal agents are reduced to three major categories. First, anti-ulcer agents act by reducing the stomach acid content either by directly neutralizing H^+ or reducing the amount of acid produced. Some anti-ulcer agents may act to coat existing ulcers to prevent further damage. Second, anti-emetics act on centers in the brain to reduce the incidence of vomiting. The final category serves to either speed up or slow down the intestinal system. This is accomplished by either increasing or decreasing the water content of the stool or by increasing/decreasing gastrointestinal motility.

ANTI-ULCER

ANTACIDS

Mechanism:	Neutralizes excess stomach acids
Indications:	GE reflux, ulcers
Examples:	Aluminum hydroxide, Magaldrate
Side effects:	Constipation and hypophosphatemia (aluminum hydroxide); diarrhea and hypermagnesemia (magnesium hydroxide)

HISTAMINE₂ ANTAGONISTS

Mechanism:	Decreases the effect histamine has on the H ₂ receptor sites. When these sites are stimulated, the parietal cells excrete gastric acid.
Indications:	Prophylactic treatment for stress ulcers and active gastric/duodenal ulcers
Examples:	Cimetidine, Famotidine, Nizatidine, Ranitidine
Side effects:	Headaches, dizziness, confusion

LOCAL ACTING DRUGS

Mechanism:	Acts to coat the mucosal lining as well as any preexisting ulcers
Indications:	Short term treatment and prophylactic treatment of ulcers
Examples:	Sucralfate
Side effects:	Constipation

CHOLINERGIC BLOCKING AGENTS

- Mechanism:** By blocking the cholinergic receptor sites these drugs decrease intestinal motility and gastric secretions.
- Indications:** Peptic ulcer disease
- Examples:** Glycopyrrolate, Propantheline
- Side effects:** Tachycardia, dry mouth, constipation, urine retention

ANTI-EMETICS

- Mechanism:** Anti-emetics tend to act on one of two sites within the brain. First, they may act directly on the vomiting center by depressing its function.
Secondly, they may act to reduce the labyrinth function to transmit impulses to the brain.
- Indications:** Prevention and/or treatment of nausea and vomiting
- Examples:** Phenergan, Metoclopramide, Phenothiazine
- Side effects:** Hypotension, Dizziness, Dry mouth

ANTI-DIARRHEALS

- Mechanism:** One of two primary mechanisms predominate. Either, slows GI motility or two, decreases the fluid content in the stool.
- Indications:** Diarrhea
- Examples:** Loperamide, Octreotide
- Side effects:** Constipation, Abdominal pain, Nausea

LAXATIVES

- Mechanism:** Many different variations on the same underlying mechanism are present, however, two predominate. Increase the water content of the stool and/or increase GI motility.
- Indications:** Constipation
- Examples:** Magnesium hydroxide, Mineral oil, Bisacodyl, Docusate calcium

Side effects: Nausea and vomiting, cramping, dehydration, electrolyte imbalances

COMMONLY TRANSPORTED GASTROINTESTINAL PHARMACOLOGIC AGENTS

This section is left blank for the services medical director or training officer to review those agents which are commonly used for transport. Topics which should be covered include dosages, indications, side effects, and any transport considerations.