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)

**HISTAMINE$_2$ 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.