bismuth subsalicylate (biz-muth sub-sa-lis-i-late)

Bismatrol, Kaopectate, Rau-Tin, Kapsettin, Pepsic Relief, Pepto-Bismol

**Chemical Name**: Bismuth subsalicylate

**Common Name**: Bismuth sub-salicylate

**Drug Class**: Antidiarrheals, antiulcer agents

**Pharmacologic**: Adsorbents

**Pregnancy Category**: C

### Indications
- **Mild to moderate diarrhea.**
- **Nausea, abdominal cramping, heartburn, and indigestion** that may accompany diarrheal illnesses.
- **Treatment of ulcer disease associated with Helicobacter pylori** (with anti-infectives).
- **Treatment/prevention of traveler’s enterotoxigenic Escherichia coli** diarrhea.
- **Unlabeled Use**: Chronic infantile diarrhea.

### Action
Promotes intestinal absorption of fluids and electrolytes. Decreases synthesis of intestinal prostaglandins.

### Therapeutic Effects:
- **Relief of diarrhea.**
- **Eradication of Helicobacter pylori** with decreased recurrence of ulcer disease (with other agents).

### Pharmacokinetics
- **Absorption**: Bismuth is not absorbed; salicylate split from parent compound is 90% absorbed from the small intestine. Salicylate is highly bound to albumin.
- **Distribution**: Salicylate crosses the placenta and enters breast milk.
- **Metabolism and Excretion**: Bismuth is excreted unchanged in the feces. Salicylate undergoes extensive hepatic metabolism.
- **Half-life**: Salicylate—2 to 3 hr for low doses; 15–30 hr with larger doses.

### Time/Action Profile (relief of diarrhea and other GI symptoms)

<table>
<thead>
<tr>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Duration</th>
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<tbody>
<tr>
<td>PO</td>
<td>within 24 hr</td>
<td>unknown</td>
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### Contraindications/Precautions
- **Contraindicated in**: Aspirin hypersensitivity, cross-sensitivity with NSAIDs or oil of wintergreen may occur. **Pedi**: During or after recovery from chickenpox or flu-like illness (contains salicylate, which can cause Reye’s syndrome). **Geri**: Patients undergoing radiologic examination of the GI tract (bismuth is radiopaque).

### Adverse Reactions/Side Effects
- **GI**: Constipation, gray-black stools, impaction (infants, debilitated patients).

### Interactions
- **Drug-Drug**: If taken with aspirin, may ↑ the risk of salicylate toxicity. May ↓ absorption of tetracycline or fluoroquinolones (separate administration by 2–4 hr). May ↑ effectiveness of probenecid (large doses).

### Route/Dosage
- **PO (Adults)**:
  - **Antidiarrheal**—2 tablets or 30 mL (15 mL of extra/maximum strength) q 30 min or 2 tablets q 60 min as needed (not to exceed 4.2 g/24 hr).
  - **Antiulcer**—524 mg 4 times daily (as 2 tablets, 30 mL of regular strength suspension or 15 mL of extra/maximum strength).
- **PO (Children 9–12 yr)**: 1 tablet or 15 mL (7.5 mL of extra/maximum strength) q 30–60 min (not to exceed 2.1 g/24 hr).
- **PO (Children 6–9 yr)**: 10 mL (5 mL of extra/maximum strength) q 30–60 min (not to exceed 1.4 g/24 hr).
- **PO (Children 3–6 yr)**: 5 mL (2.5 mL of extra/maximum strength) q 30–60 min (not to exceed 0.7 g/24 hr).

### Nursing Implications
- **Assessment**
  - **Diarrhea**: Assess the frequency and consistency of stools, presence of cramping and indigestion, and bowel sounds before and during therapy.
  - **Ulcers**: Assess for epigastric or abdominal pain and frank or occult blood in the stool, emesis, or gastric aspirate.
  - **Lab Test Considerations**: Chronic high doses may cause falsely ↑ serum acid levels with colorimetric assay.

- **Nursing Considerations**: Chronic high doses may cause falsely ↓ serum acid levels with colorimetric assay.

### Discontinued
May cause potassium levels and serum T3 and T4 concentrations.

Large doses of salicylates may also cause prolonged prothrombin time (PT).

For additional lab test considerations related to salicylate content, see salicylates monograph.

Potential Nursing Diagnoses

Shingles (Indications)

Constipation (Side Effects)

Implementation

Do not confuse Kaopectate (bismuth subsalicylate) with Kaopectate Stool Softener (docusate calcium).

PO: Shake liquid before using. Chewable tablets may be chewed or allowed to dissolve before swallowing.

Patient/Family Teaching

Instruct patient to take medication exactly as directed.

Advise patient that medications may temporarily cause stools and tongue to appear gray-black.

Instruct patient that this medication contains aspirin. Advise patient taking concomitant aspirin products to discuss bismuth subsalicylate elimination, ringing in the ears, or diarrhea.

Diarrhea: Instruct patient to notify health care professional if diarrhea persists for more than 2 days or is accompanied by a high fever.

U.S. Centers for Disease Control and Prevention warn against giving salicylates to children or adolescents with varicella (chickenpox) or influenza-like or viral illnesses because of possible association with Reye's syndrome.

Ulcers: Advise patient to consult health care professional before taking other OTC ulcer remedies concurrently with bismuth subsalicylate.

Evaluation/Desired Outcomes

Decrease in diarrhea.

Decrease in symptoms of indigestion.

Prevention of traveler’s diarrhea.

Treatment of ulcers.

Why was this drug prescribed for your patient?